Geraldine McGinty, MD from Weill Cornell Medical College delivering the Ralph Heinz Lecture, on Value-based Imaging, on St. Patrick’s Day

Notable patient safety initiatives, 2015

Where’s Waldo? Look Inside to see which of these items is receiving global recognition

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Just a Little Reminder of the Duke Legacy

Newsletter is a semi annual publication.

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E. Ralph Heinz, M.D. ’55, emeritus professor of radiology at Duke University, was interviewed last year in the American Journal of Neuroradiology. A former vice president of the American Society of Neuroradiology, he received its Gold Medal Award in 2004. In his career, he has been chief of neuroradiology at Yale University, chair of radiology of the University of Pittsburgh (where the department had two of the first five computed tomography units in the country at that time), and chief of neuroradiology at Duke, where there is a named lectureship in his honor.

After his residency, Heinz was also a fellow in radiology with Juan Taveras, M.D. ’49, a recipient of the Perelman School of Medicine’s Distinguished Graduate Award, who was considered one of dominant forces in establishing and advancing the specialty of neuroradiology. Here Heinz describes a “normal day” with Taveras: “We started a 8 a.m. with a schedule that included 3-6 diagnostic angiograms, 4 myelograms, and 3 pneumoencephalograms… . Like clockwork every day, Dr. Taveras would come down to the reading room at 3 p.m., dressed very formally in a long white coat. He would spend about 3 hours with us interpreting the studies. He was simply fantastic at it. He would pay $5 to anyone who found an abnormality he missed and 50 cents for every finding that he had seen but was mentioned by someone before him. It was just a standing joke, he would have paid, but he never had to.”

When asked what he would tell someone who is considering a career in his field, Heinz noted the new importance of nanotechnology and functional imaging. “We are at the threshold of the most exciting times for neuroradiology. The purpose of all this is to bring a multidisciplinary approach to brain function.”

But the interview was also revealed another side of Heinz – the athlete. He started playing basketball in high school and went to college on a basketball scholarship. In fact, even when he started medical school, he continued playing basketball with a semiprofessional team. “I managed to do both for a while, and then medicine took over my life and I was forced to give up basketball.” (The drawing shows him at the time he led his high school team to the state championship game in West Virginia. Along the way, he scored 35 points in one game and led all scorers in the state meet.)
For a number of years, the breast imaging faculty and staff at Duke Breast Imaging have focused on improving women's experiences as they undergo procedures to diagnose breast cancer. Imaging-guided needle breast biopsies are commonly performed, effective procedures for diagnosing suspicious breast lesions, with definite advantages over diagnostic surgical biopsies (lower costs, reduced delays, high accuracy, less invasive, use of local anesthesia); however, performing outpatient biopsies limits the use of intravenous sedation and pain medication that could address commonly experienced patient anxiety and occasional pain. Anxiety, pain and poor radiologist-patient communication can negatively impact patients’ experiences and biopsy outcomes due to patient motion and delays, could alter patients’ adherence to follow-up recommendations, and may also impact radiology practice revenues in the future. As CMS begins to factor patient satisfaction (including measures of doctor-patient communication and pain) into its reimbursement strategies, optimizing patient experiences will be brought more and more to the forefront of our care.

For the past six years, Rebecca Shelby, PhD, a clinical psychologist in Duke's Pain Prevention and Treatment Research Program and I have built a research team in breast imaging to evaluate and improve patient experiences and radiologist-patient communication, promoting Duke Radiology’s initiatives for research and collaboration. We’ve worked with breast imaging residents and fellows (Michael Cho MD, Lauren Miller MD, Melissa Hayes Balmadrid MD, Jen Jarosz MD), psychology doctoral and post-doctoral students (Anava Wren, Sara Edmond, Alyssa Van Denberg, Caroline Dorfman), medical students (Alison Vasan) and undergraduates in numerous projects, and have published studies investigating topics such as patient adherence to surveillance mammography (Shelby et al, J Clin Oncol, 2012), radiologist-patient communication and pain during biopsy (Miller L, et al, JACR, 2012; Soo A, et al, JACR 2014), persistent pain following breast-conserving therapy (Edmond S, et al Clin J Pain, in press), and the effect of waiting times on anxiety during biopsy (Hayes Balmadrid M, et al, Journal of Health Psychology, 2015).

Our most recently published study compared the effects of an audio-recorded loving-kindness meditation versus music on patient anxiety, pain, and fatigue during breast biopsies (Soo M, et al, JACR 2016). Previous studies had explored methods such as music, hypnosis and anxiolytics to reduce anxiety, which appear effective to varying degrees; however hypnosis and anxiolytics are more complicated to implement due to training costs for administering hypnotherapy, and the costs, potential side effects, and need for an adult to drive the patients home when anxiolytics are used. Meditation-based interventions have been shown to be beneficial for improving medical outcomes in a variety of settings; therefore psychologist Anava Wren PhD, Dr. Shelby, Jennifer Jarosz MD and I consulted with Mary Brantley, MA, LMFT, a teacher of loving-kindness meditation at Duke’s Integrative Medicine, to develop an audio-recorded loving-kindness mediation used specifically in the breast biopsy setting. Our study found that patients listening to the guided loving-kindness meditation or music through headphones significantly reduced patient anxiety and fatigue compared to standard care supportive dialogue from the biopsy team, without any apparent interference in radiologist-patient communication. In addition, the loving-kindness meditation resulted in significantly lower biopsy pain compared to a music intervention.

We determined that the loving-kindness meditation appears safe, inexpensive, and easy to incorporate into clinical practice, and we now offer patients the option of listening to loving-kindness meditation or music during breast biopsies. For the future, we hope to test the loving-kindness meditation intervention in a multi-institutional study, to see if our findings can be generalized across a range of practice settings, private and academic. In addition, the loving-kindness meditation may be helpful during other outpatient diagnostic procedures, and this fall we plan to test its usefulness during thyroid biopsies, myelograms, breast MRI scans and MRI-guided breast biopsies. For further information regarding this research, please contact Mary Scott Soo at mary.soo@duke.edu or 919-880-5689.

Mary Scott Soo, MD, FACR
Associate Professor of Radiology
Breast Imaging Division
Current Radiology resident Jeff Prescott and Neuroradiology professor Jeff Petrella, along with their coauthors in the Departments of Radiology, Psychiatry and in the Brain Image Analysis Center at Duke, were recently honored by the RSNA with the Alexander R. Margulis Award for Scientific Excellence for their paper, “The Alzheimer Structural Connectome: Changes in Cortical Network Topology with Increased Amyloid Plaque Burden,” which appeared in the October 2014 issue of Radiology. This award recognizes the best paper published in the journal Radiology during a given year. The award was announced and presented during the Monday plenary session at RSNA 2015.

Using data from the Alzheimer Disease Neuroimaging Initiative, the paper described relationships between white matter structural connections in the brain, using diffusion tensor MR imaging, and amyloid plaque burden in the brain, measured by amyloid PET imaging. It was found that measures of strength and organization in the structural connections in the brain (the “structural connectome”) significantly decreased with increasing amyloid plaque burden; in effect, connections between cortical regions of the brain were weaker and more random with more plaque. Most notably, these effects were seen most strongly in subjects who had not yet developed cognitive symptoms. These results suggest that breakdown of structural connections happens early in the course of dementia, perhaps even decades before the onset of symptoms. The Margulis Award Nominating and Selection committees noted that they were impressed with the novelty of the analysis, the use of a national cohort of patients, and the potential importance of the results with respect to future therapy for Alzheimer Disease.

Congratulations to Dr. Prescott, Dr. Petrella, and their collaborators for this prestigious award!

Further information, including an interview of Dr. Prescott and Dr. Petrella by the editors of Radiology, can be found at the following location:

http://pubs.rsna.org/page/radiology/margulis or
https://www.youtube.com/watch?v=3LPoaJZoxpU&list=PLXP69maNCwHvKClgQ7v0LsSZiV3jb-k0r&index=2
2015-2016 Radiology Fellows

Abdominal Imaging
- Mehul Bhakta
- Lauren Cetnar
- Alan Cubre
- Fielding Fitzpatrick
- Amy Haberman
- Sanaz Javadi
- Krupa Patel-Lippmann

Neuro Radiology
- Nicholas Befers
- Mustafa Khan
- Bradford Moore
- Christopher Oh
- Bryant Oliverson
- Katherine Williams
- Samuel Kuzminski

Musculo-skeletal Imaging
- Erin Horsley
- Watson Metzger
- Alexie Riosho
- Sanket Shah
- Craig White

Vascular Interventional
- Michael Hodavance
- Ryan Makar
- Michael Mainzak
- Jonathan Martin
- James Ronald

Breast Imaging
- Manisha Bahl
- Michelle Collins

Cardiothoracic Imaging
- Sachin Malik
- Tina Tailor

Neuro Interventional
- Patrick Brown
- Mary Huang Cobb

Nuclear Medicine
- Rustain Morgan
I am Jessie Stewart, a fourth year radiology resident at Duke. I recently had the exceptional opportunity to spend 2 months on a clinical rotation in the radiology department at Moi Teaching and Referral Hospital (MTRH) in Eldoret, Kenya. The Duke Hubert-Yeargen Center for Global Health has a long history of collaboration with this hospital as a member of the AMPATH consortium, which includes a number of US academic hospitals. Duke regularly sends internal medicine residents to this hospital for clinical rotations and leads the cardiac care unit at the hospital. I was very fortunate to have had the support of the leaders of the Hubert-Yeargen Center to be able to spend time at MTRH in order to build a relationship between the two radiology departments.

MTRH has one of the few radiology residency training programs in sub-Saharan Africa and is only one of 2 programs in Kenya. Radiology is often overlooked when discussing global health, but it truly is essential in almost every aspect of medical care, even in the developing world. The radiology attendings and residents (called registrars in Kenya) play a critical role in the care of patients at MTRH and they have the needed technology to do so, including x-ray, ultrasound, CT, and MRI. Most mornings in the radiology department at MTRH begin with a case conference or lecture. I would then typically assist with ultrasound or CT guided procedures or conduct readouts of studies with the registrars. Afternoons usually consisted of more readouts and assisting with ultrasound examinations or procedures. The fact that MTRH has a radiology residency program makes this the ideal place to work as a visiting radiologist from the US, as the registrars are energetic and eager to learn. I greatly enjoyed working together with the registrars to read studies and teaching them one-on-one. It was terrific to bounce ideas off each other and work together to problem solve, particularly in the case of challenging ultrasound studies. I also had the opportunity to give several lectures for the registrars during my rotation. I learned a great deal from the registrars and attendings about diseases they commonly encounter and the practice of radiology in a resource limited setting.

My on-site supervisor from Duke was Professor Peter Kussin of the pulmonology division, who spends approximately 4 months of the year working in Eldoret. Working with Dr. Kussin added an interesting and unexpected additional facet to my rotation at MTRH. I often rounded with Dr. Kussin in the ICU and on the medicine wards, and he and his colleagues in the internal medicine division called me frequently to review interesting cases. This relationship provided me with new insights into what it is like being on the front lines of patient care in a Kenyan referral hospital. I also traveled with Dr. Kussin and several of our other Duke colleagues to work in a hospital in the remote desert of the Turkana district in northwest Kenya. Dr. Kussin held a weeklong pulmonary clinic that was advertised on local radio stations, and there was a huge turnout of patients. It was fascinating to see a completely different patient population and to assist Dr. Kussin with reading studies in order to care for these patients. I also worked closely with the sonographers and technologists at this hospital, who were anxious to learn basic image interpretation skills, as they do not have a radiologist on site.

Life outside of the hospital also turned out to be exciting and enriching. I lived at the Indiana University House, which is home to approximately 50 physicians and medical students from the US and Canada. Building friendships with colleagues in different specialties and from different hospitals was a lot of fun, and the house has a wonderful spirit of community. We had the chance to explore East Africa on the weekends, and our weekend trips included a going on safari at Lake Nakuru, visiting Lake Victoria and the lakeside city of Kisumu, enjoying the rainforest in Kakamega, and exploring the cultural and natural beauty of Zanzibar. I also had the chance to enjoy the city of Eldoret with my new Kenyan friends and colleagues.

My clinical rotation in Eldoret was a fascinating and rewarding experience and I truly felt like I was a part of the MTRH radiology team. I have built friendships with my Kenyan colleagues that I expect will last for many years. I hope to see many of these new friends at Duke for clinical observerships in the near future, and to return to work with them again at MTRH as soon as I can. After this experience, I plan to actively seek out ways to incorporate global health into my career plans as I transition to an academic faculty position in radiology.
The clinical value of imaging involving the use of radiation for the diagnosis of paediatric illness and injury is unquestionable. The benefits of imaging children must be weighed against the potential risks of the radiation exposure with the ultimate purpose of ensuring that benefit outweighs harm. This demands policies and actions that recognize and maximize the multiple health benefits that can be obtained, which at the same time minimize potential health risks. Health-care providers requesting and/or performing radiological imaging procedures in children have a shared responsibility to communicate radiation risks to patients, parents and other caregivers. This document is intended to serve as a tool for health-care providers to communicate about risks associated with paediatric imaging procedures. The work discusses the effective and balanced benefit-risk dialogue in paediatric imaging and how this can be achieved to improve health service delivery in the context of patient, family and community-centred care. [Modified from WHO press release]
Duke Radiology CME Activities

Use $100 Duke Alumni Discount!!!!

FUTURE DATES:

2016

Mammograms to MRI 2016
June 27-30, 2016
Kiawah Island Resort, SC
26th Duke Review Beach Course
July 25-29, 2016
Kingston Plantation, Myrtle Beach, SC
Comprehensive Review of Musculoskeletal MRI
October 3-6, 2016
The Fairmont Sonoma, California
Imaging in the Blue Ridge Mountains
October 15-18, 2016
Grove Park Inn, Asheville, NC
Duke Radiology At Walt Disney World
November 6-9, 2016
Disney’s Board Walk Inn
Comprehensive Review of Musculoskeletal MRI
November 6-9, 2016
Manele Baw, Hawaii

2017

Duke Radiology in the Islands
January 16-19, 2017
The Ritz Carlton Aruba
Comprehensive Review of Musculoskeletal MRI
February 20-23, 2017
Disney’s Boardwalk Inn, Disney World
Advanced Imaging in the Islands
February 20-23, 2017
The Ritz Carlton
Grand Cayman Island
2017 Duke Review Course
March 4-10, 2017
Sheraton Imperial, RTP, NC
Radiology on Kiawah Island
June 18-21, 2017
Kiawah Island Resort, SC
27th Annual Duke Review Beach Course
July 24-28, 2017
Kingston Plantation, Myrtle Beach, SC

Duke Radiology in the Blue Ridge Mountains
October 21-24 2017
Grove Park Inn, Asheville, NC
Duke Radiology at Walt Disney World
November 5-8, 2017
Disney’s Grand Floridian Resort
Lake Buena Vista, Florida

2018

Duke Radiology in the Islands
January 15-18, 2018
The Ritz Carlton Aruba
Advanced Imaging in the Islands
February 19-22, 2018
The Ritz Carlton, Grand Cayman
Radiology on Kiawah Island
June 17-20, 2018
Kiawah Island Resort, SC
Imaging in the Blue Ridge Mountains
October 20-23, 2018
Grove Park Inn, Asheville, NC
Duke Radiology at Walt Disney World
November 4-7, 2018
Disney’s Grand Floridian Resort
Walt Disney World, Florida

Registration & information available on our website at: www.radiology.duke.edu
Save the Date!!!

The annual Radiology Department Pig Pickin’ will be Saturday September 10th, from 3:00-8:00 pm at The Frushes’. Any alumni also interesting in coming (e.g., “locals”) are welcome. Please call Candy Stewart with number attending by the 1st of August and to get directions.

919 684-7293

Merle and Molly, and Nance, Woody and Peter (Petey) are looking forward to seeing all the kids.
HONORS


Mustafa R. Bashir, MD: Selected as a Fellow of the Society of Abdominal Radiology

Salvador Borges Neto, MD: Invited Speaker March 2016 - Held at The Academy of Medicine and The Brazilian Medical Association. Dr. Borges has been an Academy member since 2002

Rajan Gupta, MD: PDC At-large Member

Charles Kim, MD PhD (Mentor) and Duke Medical Student Charles Puza: RSNA Research and Education Research Medical Student Grant “Investigation of Mechanisms of Thermal Ablation Zone Enlargement when Combined with Transarterial Embolization for Treatment for Liver Tumors.”

Daniele Marin, MD (Mentor) and Duke Medical Student Brian Jiang: Awarded RSNA grant #: 220882; “Optimization of a Frequency-Based Fusion Technique for Improving the Image Quality on Low Energy Virtual Monochromatic Images from Dual Energy CT.”

Bhavik Patel, MD: Chosen for the 2016 Radiology Leadership Institute Summit Scholarship

Edward (Ned) Patz, MD: Selected for funding for the 2016 Collaborative Quantitative Approaches to Problems in the Basic and Clinical Sciences seed funding program. “Using tumor cell genealogies to understand tumor dynamics and predict clinical outcomes”

Tina Tailor, MD: The Society of Thoracic Radiology Research grant “Integration of CT imaging features with cell-free plasma DNA as biomarkers for early lung cancer detection in patients with indeterminate pulmonary nodules.”

Terry Yoshizumi, PhD: Recipient of the AAPM Farrington Daniels Award for the best paper on Radiation Dosimetry. “Investigating the Accuracy of Microstereotactic-Body-Radiotherapy Utilizing Anatomically Accurate 3D Printed Rodent-morphic Dosimeters.”

LEADERSHIP

Karen Johnson, MD: Duke Radiology Residency Program Director following 10 years of leadership by Chuck Maxfield, MD Transition was January 1st, 2016

Joseph Lo, PhD: Director Carl E. Ravin Advanced Imaging Laboratories

PROMOTIONS

Tedric (Ted) Boyce, MD: Assistant Professor of Radiology

Morgan Camp, MD: Assistant Professor of Radiology

Lars Grimm, MD: Assistant Professor of Radiology

From News in Brazil: "People that made the City" - Niteroi/Rio de Janeiro:

Individuals include the owner of the most famous restaurant in the city, Henriqueta; several time Olympic sailing gold medalist, Torben Grael; Leonardo, 4 time World Soccer Champion and former President of the Milan Italian Soccer Team; Paulo Roberto, a globally renowned stylist and ..., and

A RADIOLOGIST FROM DUKE!!!
Peggy Hansen (resident 1986-1990) is currently chief of Radiology at Palo Alto Medical Foundation’s Santa Cruz division, a position.

All 3 photographs were created underwater. The first depicts a submerged marine iguana, the second is of schooling scalloped hammerhead sharks, and the third portrays two whale sharks. (Please see the attached images.)

Each selected image may be voted for on the RSNA website once each remaining day of the month of October. I would appreciate it if the Duke Radiology Community would support one or more of my images to be showcased at the Centennial RSNA.

(Again) Space available….

Send us your news!

2016
A reminder of Spring at Sarah P. Duke Gardens

And if you know of individuals who might not have received this newsletter, please pass it on and send contact info to help us update our email address list.
The Ugliest Christmas Sweaters:
Continuing to Search for a Good Home

Originally salvaged by Michael Brinkley and Bobby Jones, Pediatric Imaging fellows 2014-15, to transient ownership by Don Frush and Chuck Maxfield, to...?