The Next Stage of the Atlanta Clinical and Research Institute (ACTSI)

Elias Zerhouni’s tenure as Director of the National Institutes of Health (NIH) was notable for launch of the “NIH Roadmap,” designed to address knowledge gaps and barriers to translation. He established the ambitious Clinical and Translational Science Award (CTSA) Program to better equip investigators to bridge the “valley of death,” where most translational projects fail to meet the challenge of moving advances from bench to bedside. In December 2011, Congress passed a proposal of the current NIH Director, Francis Collins, to create a new NIH institute called the National Center for Advancing Translational Sciences (NCATS). NCATS is home to the now-60 CTSA grants.

The Atlanta Clinical and Research Institute (ACTSI) is a large multidisciplinary CTSA that provides critical research infrastructure spanning Emory University, Georgia Tech, and the Morehouse School of Medicine, as well as other regional partners. The ACTSI links discovery, training, and community by supporting clinical trials, clinical research training for clinician scientists, and pilot grants. Our renewal application for the ACTSI was recently approved for another five years with an award of $31 million.

The ACTSI is designed to support faculty and trainees at each stage of a translational research project (Figure). An electronic biomedical research tool (eBIRT: http://ebirt.emory.edu) connects investigators with resources of interest; eBIRT 2.0 will soon be available and have an added “matchmaker” function in which faculty can locate others interested in similar research questions. The ACTSI pilot program offers opportunities for seed grants for technology development and comparative effectiveness. ACTSI leaders have developed an inter-institutional intellectual property agreement that allows colleagues to collaborate across partner units seamlessly. A proof-of-principle fund developed in partnership with the Georgia Research Alliance (GRA) has helped to bring key developing technologies to core resources at Emory, Georgia Tech, and Morehouse School of Medicine; these include the Maestro Multispectral in vivo Fluorescence Imaging device located at the Center for Systems Imaging.

Educational offerings range from support of local biomedical symposia to formal coursework in clinical research methods and commercialization.

Research in the Department of Radiology and Imaging Sciences is highly integrated with clinical practice and teaching.

During these difficult times for federal research funding, our regional CTSA program adds a particular element of stability. I encourage all faculty to take full advantage of the resources available through the ACTSI (http://www.actsi.org).

- Carolyn C. Meltzer, MD, FACR, Chair of Radiology and Imaging Sciences
Dear Colleagues,

The recent 2013 meeting of the Association of University Radiologists (AUR) showcased our department's strength in and commitment to innovative teaching techniques. Our vice chair for education, Mark Mullins, participated in several sessions on educational scholarship, resources and metrics. Ioannis Sechopoulos gave a wonderful talk on his use of projection techniques to teach physics in an interactive manner; Kay Vydeney led an update on the American Board of Radiology (ABR) exam. In a session on “Innovative Approaches to Medical Student Involvement in Research” Stefan Tigges spoke on longitudinal projects and Kimberly Applegate, who leads the AUR Foundation, addressed the student-faculty relationship. Dr. Tigges also led a workshop on advanced powerpoint techniques for teaching. Bill Aufferman spoke on relationship. Dr. Tigges also led a workshop on advanced powerpoint techniques for teaching. Bill Aufferman spoke on relationship.

In addition to invited presentations, several faculty presented important papers at AUR. Brent Little described the Radiology Leadership Academy, Srini Tridandapani discussed his project on using photographs to help with patient identification in digital portable radiography, and Kristen Baugnon spoke on our Clinical Competency Committee and the ACGME Milestones.

Faculty Awards
The deadline for nominations for the Faculty Awards, May 31st, 2013, is fast approaching. Please note that most of these nominations require a written, one-page letter, which is the primary tool that the awards committee will use to make a final decision. So ink your pens and get started.

Instructions for nominations can be found on the Department Intranet at: https://secure.web.emory.edu/radiology/intranet/faculty_and_staff/recognition/faculty_recognition/index.html.

Awards will be presented during a celebratory ceremony on September 4th, 2013.

If you have any feedback or questions regarding this program, please contact members of the awards committee or email radiology-awards@emory.edu.

SARRAD at AUR 2013
I had the privilege to participate in the Siemens-Association of University Radiologists (AUR) Radiology Resident Academic Development (SARRAD) program during the 2013 annual AUR meeting in Los Angeles. The AUR represents academic radiologists, including faculty, residents, and fellows on a national level, and promotes radiology research, clinical teaching and resident development.

The SARRAD program occurs during the AUR annual meeting, and consists of a series of talks and interactive sessions specific to residents in the middle of their training (R2 level) to encourage and develop skills important to a successful career in academic radiology. Topics include leadership, communication skills, navigating the alphabet soup of national and international societies, and work-life balance. The program provides an invaluable opportunity to learn from program directors, chairpersons, and others who have achieved success on a national level and are eager to share what they’ve learned. It is also an opportunity to network and build camaraderie with like-minded residents around the country, learning from each other and sharing ideas about residency and beyond.

Each program around the country can nominate one resident and from those nominations the SARRAD selection committee will choose 35 residents to participate. Any R1 who is interested in a career in academic radiology is encouraged to apply next year when Dr. Mullins solicits interest.

-Thomas Loehfelm, MD, R2
Scientific Role Model

Donald Stein gave the Dean’s Distinguished Faculty lecture on April 22. In it he talked about his early interest in traumatic brain injury (TBI) that led to the current clinical trials for treating brain injuries with progesterone. He noticed very early in his career (1960’s) that female rats with brain injury recovered better than their male counterparts. A closer inspection revealed that the timing of the injury within the menstrual cycle correlated with the prognosis. This led him to consider hormones that varied during the menstrual cycle and shortly thereafter to the hypothesis that the female hormone progesterone ameliorates the effects of brain trauma.

In the 1970’s, Dr. Stein applied to the National Institutes of Health (NIH) to support additional experiments but had a very difficult time securing funding. I suspect this was for two reasons: 1) very little was known about how progesterone could provide a neuro protective effect. Without a mechanistic hypothesis many reviewers would consider these experiments a ‘fishing expedition’, and 2) there was skepticism that a naturally occurring hormone with widespread effects could be responsible for improving recovery from TBI. In other words, it was too far outside the box.

To his credit, Dr. Stein had faith in his data, recognized the potential benefit to 1.2 million new TBI patients per year, and found other ways to fund experiments. Eventually, he was able to show that progesterone has at least three mechanisms for producing beneficial effects: 1) it interferes with the chain reaction that causes brain swelling, 2) it increases the capability of vessels to remove excess fluid from the brain, and 3) it inhibits apoptosis (the process by which a cell destroys itself).

Once these mechanisms were demonstrated and corroborated in other labs, Dr. Stein began to have success with NIH funding. The initial trial in 100 patients was performed at Grady and found that treatment with progesterone reduced the mortality of moderate to severe TBI by more than 50%. Currently the treatment is being tested in ProTECH III, a large multi-center trial.

I applaud Dr. Stein for his persistence. In the face of naysayers he stuck to his convictions and was creative in funding his work. By remaining steadfast in his pursuit for a treatment for TBI, he is finally seeing clinical application – nearly 50 years after his initial experiments. What I admire most is that he is a good scientist willing to critically evaluate the data and let that dictate his next steps. He is a scientific role model.

Sincerely,
- John Votaw, PhD, Vice Chair for Research

Awards & Recognition

Caught in the Act... of Service Excellence

Earlier this year we launched a small pilot program for employee recognition program called “Caught in the Act of Service Excellence.” The program is designed to recognize noticeable acts of service excellence for which an individual or a team goes out of their way to exceed the expectations of a customer (internal or external). Although the pilot program was launched in General Diagnostic Radiology at EUH, anyone who notices an act of service excellence can submit the story by following the link to an online submission form.

During the month of March, a total of five accounts of service excellence were submitted and two of them were selected for special surprise recognition by their peers and leaders:

One afternoon when there was a particularly lengthy delay in getting patients transported back to the floor, Will Haralson (Radiologic Technologist) was spotted taking the time to tell his patient to expect a delay and also explained the reason for the delay. When he noticed the patient becoming anxious, Will made time himself to transport the patient back to their room. We want to recognize and thank Will for applying the Service Excellence Standards, especially Courtesy and Care Delivery, and for keeping the patient informed about the delay.

A Nuclear Medicine patient of ours was so impressed by the care that he received from Kimberly Harper (Radiologic and Nuclear Medicine Technologist), that he called her manager to express gratitude for the excellent care he had received. The patient told us that Kim was, “very kind, gentle and knowledgeable” and that she explained things to him and did an outstanding job. We want to recognize and thank Kim for her excellence in Care Delivery and Communication.

- Deb Smith, Director of Strategic Integration
AWARDS & RECOGNITION

**AJR Top Reviewer Award**

**Srini Tridandapani, MD, PhD**
Assistant Professor
Radiology and Imaging Sciences

**Mary Newell, MD**
Associate Professor
Radiology and Imaging Sciences

**Jianhai Li PhD**
Research Associate
Radiology and Imaging Sciences

The American Journal of Roentgenology (AJR) has over 1900 reviewers (77% from the United States and 23% international). Dr. Tridandapani, Newell and Jianhai were awarded AJR’s top reviewer award.

Each year the AJR evaluates their reviewers for performance and responsiveness to the AJR requests for their assistance. The most active and effective reviewers are listed on the masthead page of the print journal each year. Their dedication and continued engagement is critical to further the mission and vision of the journal.

**Ioannis Sechopoulos, PhD**
Assistant Professor
Radiology and Imaging Sciences

**2013 SEAAPM Best Paper Award**

Dr. Sechopoulos received the 2013 SEAAPM Best Paper Award for his paper “Characterization of the homogeneous tissue mixture approximation in breast imaging dosimetry.” His paper received the highest score from all of the reviewers on the Awards and Nominations Committee. This is Dr. Sechopoulos second time in a row receiving this award.

**Merrill’s Award**

The Merrill’s Committee is excited to announce the very first TWO TIME winner of the Merrill’s Award, Will Haralson! Will is a member of the diagnostic radiology section at EUH and has won this award in November 2012 as well as March 2013. He earned the newest award based on the submission of a portable chest x-ray on an ICU patient that displayed exceptional image quality. This highlights and strengthens our department’s commitment to patient care and Service Excellence. Congratulations Will!

The Merrill’s Award empowers and inspires diagnostic technologists to seek maximum levels of image quality through positive reinforcement. Submissions from all EHC Radiology sites are evaluated by the committee in order to determine a monthly winner. At the end of each year, a grand prize winner will win a trip to a radiology educational seminar or conference!

**Medical Imaging Program Quiz Bowl**

**Emory Staff Fest 2013**

Friday, May 17th
The Quad
Main Event 1 - 3 pm
The primary focus of the Radioligand and Expert System Laboratory is the development of radiotracers, and accompanying decision support tools, need to capture and interpret images of the kidney, and monitor renal function. For example, the radioligand laboratory, in collaboration with the Department of Chemistry at Louisiana State University, developed a novel tracer called Tc-99m tubular renal tracer (Tc-99m-NTA), which is functionally equivalent to I-131 hippuran, the standard tracer for measuring effective renal plasma flow (Taylor et al. J Nucl Med 2013; 54:578). Our group recently obtained approval for an Investigational New Drug (IND) to compare Tc-99m-NTA with Tc-99m-MAG3 in patients with suspected obstruction.

Jeff Klenc, PhD was recently awarded the Mitzi and William Blahd, MD Pilot Research Grant by the Society of Nuclear Medicine and Molecular Imaging. As the principal investigator, Dr. Klenc will lead an effort to identify a lead radiopharmaceutical to target the GPR91 receptor to investigate the renal effects of early stage diabetes and to monitor the progression of common diabetic complications.

Another focus of our laboratory is to build on our commercially successful (more than $1M in royalties for Emory University) software, called QuantEMTM, for processing renal scans. Initial work was expanded to develop an expert system that will process the two-phase diuretic renal scan, perform quality control check, correct for motion, and interpret the scan based on the presence or absence of obstruction. In a pilot study, we used a relational database (developed by Russell Folks, CNMT) to capture and merge clinical information with the quantitative results of radionuclide scintigraphy, significantly increasing the accuracy of our decision support system (iRENEX) in detecting obstruction compared to using quantitative renogram alone (Garcia et al. Eur J Nucl Med Mol Imaging 2012;39:1483). (Folks et al. J Nucl Med Tech 2012;40:236).

In addition to our work in renal imaging, we also collaborate on many other projects involving radioligands, for example: new diagnostic and potential therapeutic approaches for the detection and treatment of ovarian and breast cancer (Lipowska and Yang); and development and application of a Tc-99m folate analog to target the folate receptors on parathyroid adenomas (Yang, Weber, and Halkar). Other areas of research and academic efforts include: high altitude illnesses, the risks of sodium consumption, structured reporting and procedure guidelines.

- Andrew Taylor, MD
Professor of Radiology and Imaging Sciences


Quality Corner

Lemons into Lemonade: How can we make the most of our image quality feedback tool?

“The single biggest problem with communication is the illusion that it has taken place.”
- George Bernard Shaw

There is no doubt that communication via electronic media has made our lives more convenient. In a large and complex radiology department, there are few opportunities for radiologists and technologists to discuss image quality. The Radnet® Procedure Critique tool was intended to help fill this gap. However, like email and texting, a large part of communication—tone, body language, and the opportunity to clarify—is missing.

Certainly, there is ample room for improvement with the feedback tool in its current state. Recently, however, changes to the process have improved the way the tool fits into our workflow. Katy Day, Imaging Workflow Administrator, has added tremendous value to the process by routing the technologists’ responses to the appropriate clinical division and attending physician. As a result, response rate increased from 20% (Dec 2011-Aug 2012) to 95% (Jan 2012-Mar 2012). Also of note is that about 10% of critiques are positive and we hope to see that proportion increase.

Results from a recent survey highlighted the need to not only improve the usability of the feedback tool itself, but also the way we communicate through the tool. For example, some radiologists stated that there is insufficient response to their feedback, while many technologists note that the feedback is either not specific enough or not constructive. Radiologists and technologists alike agreed that the current process can be too time-consuming.

If you are a current or future user of the feedback tool, here are a few suggestions for ways to improve communication:

Radiologists:
• When providing feedback, be as specific as possible, and for poor quality images offer suggestion(s) on how to improve.
• Contact the technologist directly if a problem is unclear or persists.

Technologists:
• When responding to feedback, be as specific as possible, for example, state the steps you have taken to address the problem.
• Contact the radiologist directly if you disagree or do not understand a critique.

Keep in mind that image quality critiques are not intended to be punitive. Instead, they may provide valuable opportunity to learn. The feedback tool is a communication platform that we can all use to improve the quality of our work, and deliver on our promise of excellence to our patients. Together we can turn our lemons into lemonade.

Comments or questions? Contact Katy Day or Anh Duong.

- Phuong-Anh Duong, MD and Katy Day, RT

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***Story Of Charm***

Radiology’s Good Samaritan

Like an ordinary day, Jason Roberts (a Technologist for Nuclear Medicine) was leaving the Clairmont Parking deck after his shift of work. As he was leaving he noticed an individual lying across the road. The person was driving their motorcycle and was cut off by another vehicle which resulted in an accident. He saw a few individuals run to the person’s aid but he did not see anyone with scrubs who could be identified as healthcare personal. Jason stopped and offered his assistance. He wanted to make sure the injured individual did not need BLS (Basic Life Support). Jason stayed with the individual until the ambulance arrived.

Jason stated, “The real story is that before I had stopped, not a single healthcare worker (leaving Clairmont at 4:30) stopped to help this person.” Many people saw the accident and continued to drive around the individual. Even after Jason stopped, and until the point that the ambulance arrived, only one other healthcare worker stopped and assisted. He explains, “To be honest, I really did not do much other than make sure nobody moved her neck and basic things like that....”. Overall, Jason was glad that he was there to assist.

Story submitted by: Raghveer K Halkar, MD

Associate Professor of Radiology
Many years ago, I worked in a department on the 4th floor of Emory University Hospital (EUH), yet during my time at the clinic, I seem to have conveniently forgotten a few things about the hospital setting… late nights, even later night call-backs, emergency patients, and what the heck is a generator test? Those memories quickly returned when seven months ago I transferred from the outpatient to the inpatient setting for Radiology. Since the transition, I have come to admire each of the sections here at EUH and the things they are doing in the name of service excellence. I would like to share a few recent accomplishments:

- The Interventional Radiology team has made great strides to improve on-time start for the first case of the day. As a result, first patients are serviced earlier, which reduces the wait time for the next patients.
- The new, expanded Emergency Department includes a CT scanner. Our CT team of technologists will continue to provide support for invasive procedures, routine inpatient exams, patients in 2D ICU, and now scanning ED patients which will soon be done in a land of their own when the ED scanner opens in two weeks.
- As demand for new interventional MRI services has grown, the MRI section now offers certain exams on Saturday mornings to accommodate the increasing demand for certain exams.
- The Ultrasound team found a way to reduce patient wait times by streamlining the process for thyroid biopsies. Rather than checking in at the PPCA to complete the procedure consent process, the patients now go directly to the exam room.
- To help optimize our staffing model, Nuclear Medicine staff members regularly participate in cases across the street, in the clinic Building A, or in Interventional Radiology.
- The addition of a new PET scanner has decreased the amount of time our patients spend on the exam table. Additionally, the PET team is doing more CT attenuation studies and are working on dose reduction protocols for PET/CT.
- General Diagnostic Radiology always has their running shoes on. Every time I enter or leave the department, or my office at least one portable unit is doing the same thing.
- Our terrific team in Nursing continually shows dedication to our patients even when faced with staffing challenges. Very often, our nurses will stay late, or take a shift on their scheduled days off, when there are staffing shortages.
- The front desk staff has adjusted their schedule to serve the needs of IR and MRI patients who often arrive on weekdays at 6:00AM or even on Saturdays.

The transporters are often the first point contact for patients coming to our department. The transporters take great care of our patients and make sure they arrive at their destination safely. Each section works well individually but when you put them all together they make one busy department, always striving for excellence.

- Jane Vitali, Assistant Director of Imaging Services
**NEW FACES & APPOINTMENTS**

**Jason Allen, MD, PhD**
Assistant Professor- Neuroradiology

Dr. Allen received his Medical and Neuroscience Doctorate degrees from Georgetown University Medical School. He furthered his education by completing Neurology and Radiology residencies and a Neuroradiology fellowship at New York University Medical Center. Prior to joining Emory, he was a partner at TRA Medical Imaging where he held many administrative roles, including Medical Director of Radiology at St. Anthony Hospital.

Dr. Allen has published several articles covering topics in Neuroscience, Neurology and Radiology, as well as co-authoring the book chapter “Neuroendovascular Therapy of Intracranial, Extraaxial Lesions” in Abrams’ Angiography. He has participated in the teaching of Radiology residents and Neuroradiology fellows at the University of Washington Medical Center.

**Ranada Sutton**
Medical Coder- Decatur Plaza

Ranada comes to the Department of Radiology and Imaging Sciences with over eight years of experience in Medical Coding. Prior to Emory she was a Medical Coding Abstractor with the OBGYN Department at the University of Mississippi Medical Center. Ranada is a Certified Professional Coder and is a member of the American Academy of Professional Coder.

**Deqiang Qiu, PhD**
MR Physicist - EUH

Prior to Emory Dr. Qiu was a Research Associate for the Department of Radiology at Stanford University. His research focuses on the development and application of advanced MR neuroimaging techniques that include iron oxide based methods, ASL, and diffusion imaging; to better understand human brain functions and to help make better diagnosis of neurological diseases.

**Bimonthly Rad Reports**

Effective this month, May 2013, Rad Report will become a bimonthly newsletter and will be completely electronic in July. The primary goal of the newsletter is to serve as a vehicle of communication for department faculty and staff.

Media and Communication Services is in the process of revamping the newsletter to focus on current stories and events within the department. We will continue to create a balance of newsletter content that will appeal to all of its readers. You are encouraged to continue to submit your stories or suggestions that you would like to see in the Rad Report. Look for the newsletter’s fresh new look in July!