

# NEWSLETTER

## AUR 2015 New Orleans



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This newsletter serves to highlight current ACER goals and keep members informed of ongoing projects after a great meeting in New Orleans!

Members and potential new members are encouraged to get involved! One way to get involved is through committee membership and organizational leadership. Contact Mahesh Thapa ([thapamd@uw.edu](mailto:thapamd@uw.edu)), chair of the nominating committee, if interested.

Member contributions to upcoming newsletters are welcome! Send your contributions to Puneet Bhargava ([bhargp@uw.edu](mailto:bhargp@uw.edu)) or Matthew Heller ([hellermt@upmc.edu](mailto:hellermt@upmc.edu)).



# MISSION, GOALS & MEMBERSHIP

## Mission & Goals

To provide a formal organization and forum for clinician-educators to meet, exchange ideas, and learn new skills that promote their careers as clinician-educators.

To provide AUR meeting program content targeted for the needs of clinician-educators.

## Benefits of Membership

Access to information and database for the benefit, awareness and nurturing of clinician-educators.

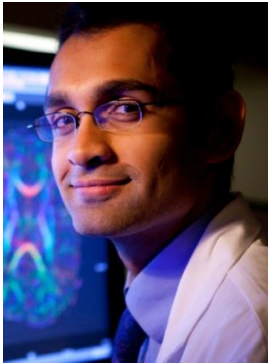
Opportunities for involvement in educational research relevant to clinician educators.

## Membership Update

ACER now has 286 members!

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## Three ways to vitalize your radiology physics curriculum



Ram Srinivasan, MD, PhD is the Course Director at [ABR Physics Review](http://abrphysicsreview.com) (abrphysicsreview.com) and a neuroradiology fellow at Stanford University. He's also the co-author of [Radiology Simplified](#), the first Core Exam review book written specifically for the iPad, with over 100+ diagnostic-quality clinical cases, 70+ pinch-to-zoom figures explaining physics concepts, html links to Core-essential RSNA articles, and comprehensive coverage of Core-relevant radiology physics.

**If you're at a loss on how to revitalize your residency program's Core physics curriculum, you're not alone.** In the AUR (APDR/A3CR2/APCR) Core Exam Survey, nearly 60% of residents who took the 2013 Core exam felt their internal physics review sessions were average or less than average in helpfulness. In contrast, more than 50% of students who attended short end-of-year external review courses felt their experience was helpful to most helpful. As educators, we know that "board frenzy," cramming

clinically-relevant physics, won't help these future radiologists assert their position in medicine as domain experts on imaging. I've included three bold ways to revitalize your physics curriculum based on my experience with residents and residency directors in the United States and Canada through [ABR Physics Review](#) this year.

### 1. Eliminate the 7am lecture.

Pushing sleepy residents into a windowless classroom to learn physics before sunrise is cruel and probably unusual. "Residents are voting with their feet," said one residency director, who told me that physics instructors were frustrated with lack of attendance at 7am lectures, even though it was mandatory. Because radiology physics is vital to the Core exam and our future as radiologists, we cannot afford to have residents attend class with their eyelids in the closed position.

The solution? Interactive, live sessions that students can attend online from home on the weekends. While some well-staffed programs have moved their board-focused lectures into the noon and afternoon hours, many programs cannot afford to have residents leave busy clinical services. By moving physics lectures online, residents can attend live sessions in the weekend afternoon (while they're awake), from the quiet comfort of their home. As an added bonus, residents that are away for AIRP or on call can still review lectures they've missed.

### 2. Enlist cross-trained teachers and make physics relevant to residents.

It makes sense that clinically-relevant physics should be taught by instructors with strong technical and clinical backgrounds. For many programs, covering all the modalities with dual expertise can be challenging for a variety of reasons.

The solution? Cover the modalities you can with in-house teachers that truly have dual expertise in clinical and technological aspects. For the rest, connect online with passionate teachers that can help fill in the gaps for your residents. This approach will reduce the burden on faculty that genuinely don't want to teach. The lecture content will also be inspirational, because the best teachers will naturally infuse their speech patterns with examples of how Core-testable radiology physics knowledge affects patient care, practice management, and public health.

### 3. Incorporate modern reading material.

The traditional textbook can be dense for the purposes of exam preparation, where residents have more recently gravitated towards a growing array of electronic resources with higher image quality and streamlined presentation style. The ABR Core Exam Survey doesn't ask about traditional textbooks in its list of study materials. Residents tell me that the RSNA Physics Modules continue to be a strong online resource, but the material can be redundant and fragmented at times. Although textbooks are dense, the idea of reading that provides a cohesive reference for residents is still important, because it provides a framework to place knowledge formed during interactive lectures. As a start, RadioGraphics has compiled a collection of their [core-relevant physics articles](#). Connecting those articles to lectures in a cohesive sequence is your homework assignment as residency director.

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### Breast Imaging Education for Medical Students

By: Dr. Roshni Parikh and Dr. Holly Marshall University Hospitals, Case Medical Center



In the United States, breast cancer is the most commonly diagnosed cancer in women, with one out of every eight women being diagnosed in their lifetime.<sup>1</sup> The multidisciplinary approach to the diagnosis and management of breast cancer involves primary care (family medicine, internal medicine, and OB/GYN), radiology, surgery, pathology, medical oncology, and radiation oncology. Due to the high prevalence and multidisciplinary nature of care, we believe that all medical students should be required to have basic but comprehensive breast imaging education.

Physicians at the forefront of patient care need to be well educated regarding all aspects of breast imaging. It is important for physicians to understand the difference between a screening and diagnostic mammogram, including the process of performing a mammogram and basic mammographic views obtained. Having a basic understanding of the BI-RADS is also important so physicians can inform their patients and ensure appropriate follow up when needed.



A patient's breast density affects the sensitivity of screening mammography. In 2014, the state of Ohio passed the breast density notification law, SB. 54, where radiologists are required to state the patient's breast density in their letter to patients.<sup>2</sup> We suspect the number of patient questions regarding the clinical implications of their breast density and the need for further testing will increase. Therefore, educating medical students regarding the variations in breast density and its clinical implications is essential.

Finally, breast centers commonly perform a variety of procedures, including biopsies, needle localizations, and ductograms. These procedures can be anxiety provoking for patients. Formal instruction regarding what and how these procedures are performed will allow referring physicians to prepare their patients for these interventions.

At our institution, we have introduced a required breast imaging lecture to all 4<sup>th</sup> year medical students rotating in Radiology. The lecture is divided into five parts: (1) why perform screening mammograms, (2) differences between screening and diagnostic mammograms, (3) breast imaging procedures, (4) breast density and BI-RADS categories, and (5) Breast MRI. This comprehensive review provides our graduating medical students rotating through radiology with the most relevant information to educate their future patients. In the future, we would like to give the lecture during required third year clerkships to teach a greater number of medical students. As physicians, it is our goal to provide the best possible care to our patients and that begins with in-depth education at the medical school level.

#### References:

1. "Breast Cancer Facts." *National Breast Cancer Foundation, Inc.* National Breast Cancer Foundation, Inc., 2012. Web. 28 Jan. 2015. <<http://www.nationalbreastcancer.org/breast-cancer-facts>>.
2. Kearney E. and Eklund, J. "Sub. S.B. 54, 130th General Assembly, 2013-2014." *Ohio General Assembly Archives*. Legislative Information Systems, 2015. Web. 28 Jan. 2015. <[http://archives.legislature.state.oh.us/bills.cfm?ID=130\\_SB\\_54](http://archives.legislature.state.oh.us/bills.cfm?ID=130_SB_54)>.

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## Optimizing Residency Lectures and Clinical Reviews for the Core Exam



Jonathan Park, MD, is an interventional radiology fellow at UCLA. He is a co-author of [Radiology Simplified](#), the first Core Exam review book written specifically for the iPad, with 100+ clinical cases designed to simulate the Core exam, along with comprehensive coverage of Core-relevant radiology physics.

As a recent graduate from UCLA in 2014, and part of the class that took the first Core examination, the process of prepping for the first part of our board certification is still fresh in my memory. Residents around the country felt that there was a black hole of knowledge or precedence on how to best prepare. From talking to other residents, emotions ranged from anxiety to frustration, and even outright resentment at the uncertainty at what the ABR would present to us, and whether traditional oral boards prep would suffice.

Traditionally at our program, fourth years prepping for the oral boards would go into high gear the last several months with several hours of daily 'hot seat' style lectures where cases were taken in a simulated oral boards setting. Daily noon conference lectures that all levels of residents attended were in a similar format, where fourth year residents would sit in the front row taking cases publicly while underclassmen would try to learn passively while watching. While this style was beneficial in training seniors to be comfortable developing gamesmanship to take the oral boards, it was thought that this style would be less effective in preparing residents for a computer-based exam showcasing cases with multiple levels of sequential questioning, in addition to having some questions with 10+ answer choices.

To adapt, our program Dr. Robert Suh advocated revamping the boards lectures. Instead of having a few months of intensive daily prep, we transitioned to having one 4 pm lecture a week throughout our third year provided by a subspecialty attending. Not only did this encourage us to start thinking about boards prep earlier, several of us found it beneficial to review the subject on our own before attending lecture. In addition, lecture content was quite different from the past. Typically we would first be presented with a case which we would take oral boards style (allowing us to continue developing polish in talking through cases), then subsequent slides would feature multiple choice questions to simulate the Core. Our residency noon conference lectures also shifted towards this format, and an audience response system may eventually be incorporated to make the lectures more interactive for junior residents. In summary, as boards certification has changed for better or worse, it is important for residency lectures to evolve to meet residents' needs.

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## Maximizing Use of Dictation Software for Learning



Cory Pfeifer MD  
Kansas University Medical Center

The growth of Diagnostic Radiology as a valued specialty yields rewards and challenges. While increases in case volume undoubtedly expand learning opportunities for radiology residents, the demand for improved turnaround time may result in decreased time for residents to seek out necessary resources to guide clinical recommendations or classify abnormalities.

In 2012, my institution upgraded its voice recognition software which removed caps to the number of dictation templates that users could store. At the time, as is likely common in many reading rooms, our office spaces were lined with various reference charts and cheat sheets designed to facilitate reporting. The problem with this is that no 2 office spaces are alike. For instance, you may need an ultrasound reference while you are dictating at the CT reading area.

The solution I arrived at was to digitize all of these charts and guidelines and actually store them within the dictation software among the report templates. Since each user's profile moves with him or her to the unique workstation utilized, all of these resources are always on hand either via a quick mouse scroll through one's catalog or via the calling up of the file through a voice command. No longer was there a need to utilize the Internet or even access digital storage space. Some of the most highly valued text files I generated include lung nodule size criteria, normal ranges for pediatric organ sizes, trauma classification systems, Bozniak cyst definitions, expected beta hCG levels early in pregnancy, and flow velocity criteria for Doppler ultrasound. Having these shortcuts conveniently stored in the software created time for younger residents to focus on the pathology involved in each case.

The real value, however, was even better realized by more senior residents. It soon became commonplace for residents to utilize this trick to store high-yield facts without having to worry about passers-by wondering if they were neglecting their clinical duties by closing their dictation window or pulling out a book. Lull between ED exams? Simply click over to your voice-retrievable file that details cancer staging or radionuclide decay times and refresh your memory. Slow morning? Why not review the parameters affecting image contrast without even leaving your workstation?

As residents face time constraints and increased case volumes, we must avail ourselves of every possible trick or shortcut available. If you haven't considered it before, use your dictation software for more than just report templates.

## Mentoring

By Arjun Sharma MD & Paul Nagy MD

Johns Hopkins Medical Center

In January, 2013, ACER sent a message to its junior members, offering the opportunity to be paired into mentor relationships with volunteer clinician-educators. For those junior radiologists fortunate enough to have excellent educators within their departments, the initiative sought to offer cross-institution mentoring or exposure to radiologists from a different part of the country. For other junior radiologists like me, it offered the opportunity to find mentors in niche fields who might otherwise not be so easily accessible.

It was in my R3 year I first heard about the radiological subspecialty of informatics. This field was of tremendous interest to me, but clinicians with significant informatics expertise are few and are limited to a small number of institutions.

ACER was able to pair me with Dr. Paul Nagy, Assistant Professor at Johns Hopkins, forging a relationship which has proven fortuitous and educational and will hopefully continue for many more years.

The benefits to a junior colleague in such a partnership are many. Career guidance, support for development of managerial and leadership skills, and introductions to other leaders in the field are a small subset of the advantages afforded to the mentee when a good fit is established. Dr. Nagy has been instrumental in my involvement in pursuits related to the American College of Radiology, the Radiology Leadership Institute (RLI), quality initiatives, and the securing of employment at an institution where I can continue to grow.

The potential rewards for the mentor are also considerable. The clinician-educator role itself was borne of the value derived in passing on to the next generation the knowledge and expertise one has gained through years of experience. The establishment of such a relationship provides a formal setting in which to practice one's teaching and managerial skills. It can also act as a means of networking, connecting the mentor to persons and ideas from other regions, institutions, cultures, and generations. A side benefit may further include academic pursuits and projects performed jointly, with the mentor acting in an advisory capacity.

At an RLI committee meeting at RSNA 2014, a question arose as how best to promote the mentor relationship within our specialty at the residency level and beyond. Here are two votes for the ACER initiative as one great answer to that question.

For further reading regarding radiology mentoring and academic mentoring, please see the references below (1,2).

### References:

1. Iyer, Ramesh S, et al. Why Do Academic Radiologists Choose Mentors? *Academic Radiology*. 2013 Aug; 20(8):921-2.
2. Kashiwagi DT, Varkey P, Cook DA. Mentoring programs for physicians in academic medicine: a systematic review. *Acad Med*. 2013 Jul;88(7):1029-37.



## Utilization of social media in radiology for resident career development

Supriya Gupta, MD

Georgia Regents University

Social networking has become an integral component of society, involving every field of work. How can this affect us as a radiologist, specifically as a resident; can it be utilized for achieving our goals? The answer is yes. The rise of radiology social networks can be categorized as Online media ( Twitter, facebook, mobile platforms and forums) and Personal/ social gatherings ( Conferences, annual meetings, review courses). Whatever the medium, social networking is essential in radiology for efficiently building, developing and maintaining a professional network. This even allows finding and maintaining contact with colleagues and alumni from medical school, residency, and fellowship. Networking enables us to enrich contacts with colleagues around the world, thereby, spawning new dynamic relationships based on common interests and experience.

What can you gain from networking as a resident?

- Discover new, often unpublished, opportunities through your network, establish research collaborations
- Learn about unpublished fellowship and job opportunities
- Find people with same interest as your own, find out what others are looking to invest in
- Develop business relationships and form new ventures

Remove barriers to collaboration

- Share media (images, cine animations, 3D renderings & reconstructions, documents, PDFs)
- Discuss latest radiology news, articles, and conferences
- Seek help or consults from a community of experts
- Learn from other radiologists who have common research/clinical interests or expertise

Networking Strategies

- Demonstrate respect for the host
- Be interesting
- Step outside your comfort zone
- Invite others to join you
- Refer to people by name
- Have an escape plan

Yes it can be bad too!

- Avoid career casualties, don't post/write/share personal stuff
- British Medical Association issued guidance for medical professionals about using social networks

References: <http://www.alliancemedical.co.uk/articles/social-networks-and-radiology#.UxiSVvldV3U>

<http://www.physicianspractice.com/pearls/networking-strategies-medical-professionals>

Radiology social media: quick guide on how radiologists and medical imaging professionals can benefit from social media and social networking. <http://www.radrounds.com/profiles/blogs/radiology-social-media-guide>

Net Assets: The Social Web for Radiology. Part II. Social Networking for Radiologists. Garry Choy and Stuart R. Pomerantz, Radiology 2009 252:3, 642-646 .





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