From The Editor

2016;9[1]:1

by Lane F. Donnelly, MD, ABR Trustee

All the best to you in 2016! We present to you the first edition of *The BEAM* for this new year. As always, our purpose for *The BEAM* is to effectively communicate activities of the ABR and any changes in the credentialing landscape. To that end, we have included a number of articles that we hope you will find informative and helpful. We have also redesigned our layout to make it easier to read, especially for those of you who are using mobile devices.

This issue contains a personal perspective on MOC from Dr. Milton Guiberteau, ABR president; an article on the first full MOC look-back and the new simplified attestation process for MOC by Dr. Vincent Mathews; an article on the first diplomate to use simplified attestation; and a "Focus on Quality and Safety" article regarding changes in the ABR approach to quality and safety that I have written. Other features include articles focused on residents (Dr. Donald Flemming), interventional radiology (Dr. James Spies), diagnostic radiology (Dr. Kay Vydareny), radiation oncology (Drs. Paul Wallner, Dennis Shrieve, and Anthony Zietman), and medical physics (Drs. Geoffrey Ibbott and Donald Frey).

Additional information concerns the schedule for ABR booths at societal meetings, an update on the ABR Connections Center, and a "Spotlight on an MOC Participant." Your feedback on the content of The BEAM is always appreciated; send an email to abr@theabr.org.

From the President

Merriment Meets MOC

2016;9[1]:2-3

by Milton J. Guiberteau, MD

It's nearing the end of 2015 as I write this, and I am grumpy. I am scrunched in the back of a very large black vehicle (the kind I imagine would be driven by the Secret Service or maybe a drug lord). My fellow passengers are four children under 10 and four other adults, all related to me, or so I hope. Our destination is the proverbial "grandmother's house," and we know there will be pie, lots of pie, when we get there, which usually makes me happy with anticipation. But at this moment, I am trying to write a message to you for the January issue of *The BEAM*, and in a car full of "Jingle Bells" singers and excited, hyperkinetic kids, nothing profound comes to mind. So, I am grumpy. Truthfully, that is only half the story, since the night before I concocted a list of things I have to do before the end of the year or in early 2016, and it is long. It includes taking an accounting of some of my personal ABR MOC responsibilities. A partial list reads as follows:

1. ***ATTESTATION.*** As I think about ***attesting on myABR to meeting my MOC requirements*** before the end of the year, it occurs to me that I now have until March 1, 2016, to do it. I like this, so I take this off my EOY list and move it to February.

2. ***PRACTICE IMPROVEMENT PROJECT (PQI). Entering the details of my PQI project on myABR*** is a real pain, but I remember that with simplified attestation beginning on January 4, this is no longer required, and since I did the work and have access to the data, all I need to do is attest "yes" by March 1. And, besides, I have actively participated in several of the newly approved Quality Improvement Activities that also count for completion of MOC Part 4 (PQI), so I am well covered. As my list is getting shorter, I timidly hum a chorus of "Jingle Bells" with the kids.

3. But, the ***MOC EXAM*** still looms like Dickens' "Ghost of Christmas Yet to Come." I am due for an MOC examination in the next several years, and since I will take all my clinical modules in my subspecialty of nuclear medicine, I am not worried. But it does mean scheduling the exam and the necessary time off from work, arranging for a hotel, and yet another airplane ride with my computer screen pressed three inches from my nose by the guy reclining in front of me. Maybe not for me, but for the future, an ABR Task Force is working diligently to evolve this arbitrary 10-year knowledge biopsy into an assessment that I may be able to do at home via the Internet, or at least closer to home. MOC without a formal examination, but with ongoing quiz cases relevant to my personal practice activities throughout the year, including feedback and

opportunity to learn about the areas in which I underperformed, is being piloted within the ABMS board community and has been well-received so far. Personally, I like the idea. We should know more about how this prospect is going in 2016, but, if adopted, it will take time to implement, so I may still need to schedule my exam.

4. While I am not concerned about the part of the exam profiled to my areas of clinical practice, the ***NONINTERPRETIVE SKILLS (NIS)*** part of the exam will require some special studying. Some of the topics are interesting and do apply to me, but I have to admit that this is the part of the MOC exam I personally find the least appealing. I am not looking forward to memorizing 100 pages of stuff, much of which does not apply to what I do every day and that I will promptly forget after the test. Since recent diplomate feedback indicates that I am not alone in these thoughts, the ABR now has established a work group to make more practical sense of what those of us in practice should know about nonclinical topics that impact us and should be refreshed in our memory banks. (I have made myself a note to urge them to speed this up—I have written this confident that our staff editor Donna will strike it out, since as ABR President, maybe I am not supposed to say things like this?)

5. ***PROFESSIONAL STANDING AND CME.*** I am further cheered by the fact that my Texas medical license is good for two years, and that I have more CME and Self-Assessment CME credits than there are choruses to "Jingle Bells," thanks to fact that in ABR MOC, ALL ***enduring*** category I CME counts as self-assessment. And, rather than listing every credit on myABR, I will just check the "yes" box to attest that I have the proof of completion in a file on my computer.

At this point, I am feeling much better about documenting my MOC participation for 2015 and now energized to write my article for *The BEAM.* But, just as I finish this last note, my eldest nephew reaches back and snatches the pen out of my hand as he declares "Uncle Mick, you're done!" And so I am. Now, it's all about the pie.

My thanks to my fellow hard-working ABR board members, as well as our fantastic executive director and staff, for their support and for putting up with me in 2015. (With any luck, they'll stick with me this year.) And, a very happy 2016 to all of you!

Focus on Maintenance of Certification

Important: Don't Forget March 1 Deadline for myABR Attestations

2016;9[1]:4-5

by Vincent P. Mathews, MD, ABR Board of Governors

All diplomates participating in Maintenance of Certification (MOC)—except those initially certified in 2013, 2014, and 2015—will have their first "full" annual look-back on March 2, 2016. ***To ensure that they maintain their certification, these diplomates must attest to meeting their MOC requirements for Parts 1, 2, and 4 no later than March 1, 2016***. Since the ABR has records of those who have taken and passed the MOC Exam, attestation for Part 3 is not necessary. Other diplomates, initially certified in 2013 or later, must attest only to Part 1—licensure.

The new simplified attestation process became available on myABR beginning Monday, January 4, 2016. With simplified attestation, diplomates will need to log in to myABR and simply affirm that the requirements for each part of MOC have been met. Entering detailed data is no longer necessary, but diplomates will need to retain this information so they can document that they have met MOC requirements in case of an audit.

The ABR will continue to accept CME, SA-CME, and SAM data from the CME Gateway and the ASTRO Gateway. Self-entering of CME, SA-CME, and SAM data was available through December 31, 2015. Now, self-entered and Gateway credits are accessible as a read-only page on myABR. Details of all Part 2 credits from years 2012 through 2015 may be exported as an Excel document on myABR through the end of 2016. Diplomates may use this Excel document on their personal computers to track their own CME and SA-CME credits. Diplomates will need to check the CME and ASTRO gateways to access their detailed CME and SA-CME information.

Attestation by March 1, 2016, is very important. A diplomate who does not meet MOC requirements in one or more of the four MOC parts for the first time at an annual look-back is reported to the American Board of Medical Specialties (ABMS) and on the ABR website as "certified, not meeting the requirements of MOC." That status persists until the diplomate has met the requirements in all four parts or one year has elapsed, whichever comes first.

If the deficiencies are not remedied by the time of the next look-back a year later, the certificate is withdrawn (reported as "lapsed"), and the diplomate is not listed as certified by the ABR or the ABMS. That status persists until the diplomate has met the requirements for regaining certification.

For more information on MOC look-back timing and requirements, go to the appropriate page for your discipline:

Diagnostic Radiology and Its Subspecialties: http://www.theabr.org/moc-dr-time
Radiation Oncology: http://www.theabr.org/moc-ro-time
Medical Physics: http://www.theabr.org/moc-rp-time

For a list of Participatory Quality Improvement Activities that are now accepted to meet MOC Part 4 requirements, go to http://www.theabr.org/moc-part4-activities.

If you have any questions, please call the ABR Connections Center at (520) 519-2152 or email moc@theabr.org.

Simplified Attestation: First User Comments on New Process

2016;9[1]:6

On January 4, 2016, after months of diligent work by our IT Department, we were pleased to launch our new "Simplified Attestation" process in myABR. Now diplomates need only to log in to myABR and affirm that they have met requirements for Parts 1, 2, and 4 of MOC. Entering detailed data is no longer necessary, but diplomates need to retain this information so they can document that they have met MOC requirements in case of an audit.

The first physician to take advantage of the new process—a mere 30 seconds after its launch!—was Daniel Gurell, MD, a diagnostic radiologist from University Diagnostic Medical Imaging, PC in Bronx, New York. We reached out to Dr. Gurell to ask him a few questions about the new process.

He told us that he had used myABR in the past to attest to his MOC activities, but he immediately noticed the changes, and that he completed his online attestation in a matter of seconds. He said that it was much easier, quicker, and more intuitive than in the past. Dr. Gurell had not been aware that the new process was in place. He goes on the site each year to attest and update his information, and this time he just "happened" on the new, better system, which gave him no problems whatsoever.

Dr. Gurell was so pleased with the new website, he did not have any immediate suggestions for improvement. One thing he asked us to reiterate was that the new attestation system does not require updating or uploading of CME credits, which in the past was a bit tedious. Thanks for your input, Dr. Gurell!

Focus on Residents

Frequently Asked Questions

2016;9[1]:7-8

by Donald J. Flemming, MD, ABR Trustee, Diagnostic Radiology

The new ABR call center, known as "ABR Connections," receives many queries from candidates. In this article, I would like to discuss some of the more common questions that pertain to initial certification.

1. I am interested in subspecializing in vascular and interventional radiology (VIR). How does the new interventional radiology (IR) training pathway affect me if I am currently in my residency program?

The new IR residency will affect any person who starts IR training after July 1, 2020. This includes nearly all diagnostic radiology (DR) residents whose radiology (post-internship) start date is on or after July 1, 2016. All VIR certificates offered by the ABR will change to the new IR/DR certificate after July 1, 2020. In addition, the ACGME will no longer accredit one-year fellowships after July 1, 2020. At that point, training in IR for DR residents will have to be in either a one- or two-year independent IR residency. For DR trainees to be in a one-year independent IR program, their PGY-5 year of DR training must be in an ACGME-approved Early Start in Interventional Radiology (ESIR) curriculum. For more information on IR training pathways, see the "Focus on Interventional Radiology" article in this issue of *The BEAM.*

2. Will I be able to start in a Diagnostic and Interventional Radiology Enhanced Clinical Training (DIRECT) Pathway program in July 2016?

Yes. July 2016 is the last month in which a trainee may start in a DIRECT Pathway position. Trainees in this situation will be able to sit for their DR exam and VIR subspecialty exam. The DIRECT Pathway program will sunset in 2020, so a start date later than 2016 will not be possible.

3. Why am I not receiving important email information or updates from the ABR?

It is VERY important that all candidates update their contact information in myABR. A common problem is not updating information upon graduation from residency. It is a good practice to log in to the myABR portal at least once a year to be sure your contact information is correct. In

addition, please check your spam, junk, or bulk email folder to see if any ABR emails are there. If so, simply add the ABR email address to your safe sender list.

4. Why do I have to attest to having a medical license when I enroll in the initial certification process?

One of the cornerstones of certification is professional standing. If a candidate does NOT have a medical license, an ABMS member board cannot certify him or her. This is also true for all diplomates after earning certification. If a diplomate loses his or her medical license, the diplomate may also lose board certification.

5. If I complete CME, SA-CME, or a PQI project/activity during my fellowship training, may I use these to meet my first three-year look-back for MOC requirements?

Yes. Maintenance of Certification (MOC) is now a continuous process. Rather than reviewing MOC compliance every 10 years, a diplomate is reviewed annually with a three-year rolling look-back process to ensure compliance with the four parts of MOC: (1) Professional Standing (license); (2) Lifelong Learning and Self-Assessment (CME and SA-CME); (3) Cognitive Expertise (passed initial certification or MOC exam in the past 10 years); and (4) Practice Quality Improvement (project or acceptable alternative activity). CME, SA-CME, or PQI projects/activities completed in the year of final certification will count toward meeting requirements for the diplomate's first three-year MOC look-back.

Focus on Quality and Safety

The Approach to Quality and Safety as Pertains to ABR Certification in Diagnostic Radiology

2016;9[1]:9-10

by Lane F. Donnelly, MD, ABR Diagnostic Radiology Trustee for Quality and Safety

During the past 15 years, a great deal of attention in American medicine has focused on quality and safety (Q&S) and how we can ensure the reliable delivery of safe, effective, efficient, and patient-centered care. Within the radiology community, great progress has been made regarding these aspects of care, although we continue to have room for improvement.

From a certification standpoint, over the past decade the emphasis on leveraging the board certification process to foster a culture of Q&S among the member boards of the American Board of Medical Specialties (ABMS), including the ABR, has increased. There is evidence that board certification is in itself associated with improved quality [1-3] and that members of the public see board certification as important to their confidence in their physicians [4, 5]. Although the process is still relatively new, there is also growing evidence that Maintenance of Certification (MOC) is associated with increased quality [6-10].

While most would not argue that the Q&S of clinical services that radiology provides is of utmost importance, the board has heard concerns from ABR candidates and diplomates about the Q&S and Noninterpretive Skills (NIS) content on ABR initial certification and MOC examinations. Some feel such questions are not relevant to an individual's radiology practice and that they are overrepresented on the examinations.

It is very important to the ABR that Q&S topics be perceived as valuable and not viewed as esoteric aspects of board certification. As an initial step, the ABR has converted a trustee position to be focused exclusively on issues related to Q&S. This position began in October 2015.

An NIS Workgroup also has been formed, and a process has commenced to review and improve the current methods by which the Q&S and NIS examination questions are created. Issues being considered include the quantity of questions related to Q&S/NIS on examinations, the relevance of Q&S/NIS questions to radiology practice, and the structure and length of preparatory content (Q&S/NIS syllabi). Further information will be communicated after the

ABR Boards of Governors and Trustees have made decisions regarding Q&S and NIS exam content.

References

1. Reid RO, Friedberg MW, Adams JL, McGynn EA, Mehrotra A. Associations between physician characteristics and quality of care. Arch Intern Med 2010;170:1442-1449.

2. Curtis JP, Lurbbert JJ, Wang Y, Rathore SS, Chen J, Heidenreich PA, et al. Association of physician certification and outcomes among patients receiving an implantable cardioverter-defibrillator. J Am Med Assoc 2009;301:1661-1670.

3. Turchin A, Shubuna M, Chodos AH, Einbinder JS, Pendergrass ML. Effect of board certification on antihypertensice treatment intensification in patients with diabetes mellitus. Circulation 2008;117:623-628.

4. The Gallup Organization. Awareness of and attitudes toward board-certification of physicians. https://www.abim.org/pdf/publications/gallup_report.pdf.

5. Guiberteau MJ, Becker GJ. Counterpoint: maintenance of certification: focus on physician concerns. JACR 2015;12:434-437.

6. Hagen MD, Sumner W, Fu H. Diuretic of choice in ABFM hypertension self-assessment module simulations. J Am Board Fam Med 2012;25:805-809.

7. Duffy FD, Lynn LA, Didura H, et al. Self-assessment of practice performance: development of the ABIM practice improvement model (PIM). J Contin Educ Health Prof 2008;28:38-46.

8. Miller MR, Griswold M, Harris JM II, et al. Decreasing PICU catheter-associated bloodstream infections: NACHRI's quality transformation efforts. Pediatrics 2010;125:206-212.

9. Peterson LE, Blackburn BE, Puffer JC, Phillips RL Jr. Family physicians' quality interventions and performance improvement through the ABFM diabetes performance in practice module. Ann Fam Med 2014;12:17-20.

10. Vernacchio L, Francis ME, Epstein DM, et al. Effectiveness of an asthma quality improvement program designed for maintenance of certification. Pediatrics 2014;134:e242-248.

Focus on Diagnostic Radiology

A Short History of Certifying Examinations in Diagnostic Radiology

2016;9[1]:11-13

by Kay H. Vydareny, MD, Associate Executive Director for Diagnostic Radiology and the Subspecialties

Now that the transition to our new examination paradigm is complete, and the "Examination of the Future" is now the "Examination of Today," it is a good time to look back at the history of ABR certifying examinations in diagnostic radiology.

The ABR was incorporated in January 1934, and the first examination—an oral examination covering musculoskeletal, thoracic, gastrointestinal, and genitourinary radiology—was given later that year. No two examiners used the same material, and thus no two examinations were the same. Applicants for the first exam were separated into three groups: The members of one group, who were considered outstanding radiologists, were given their certificates without an exam; the second group, which consisted of lesser-known but still important radiologists, took four-category exams; and the third group, everyone else, took six-category exams. Residents had to wait a year after finishing a training program to qualify for the examination.

It wasn't until 1968, after the trustees had discussed for years the possibility of having a written examination in the basic sciences, including physics, that the first written examination was conducted. The questions were written by the National Board of Medical Examiners, although the topics were chosen by ABR trustees. The written examination had to be passed before the oral examination could be taken.

Although the oral examinations were originally given at multiple sites throughout the country, the Board of Trustees decided in 1981 to hold them once a year at the Executive West Hotel in Louisville, Kentucky. Most of those reading this article probably had the "good fortune" to take their oral examination at that hotel. All will remember the mismatched, garish color schemes, pans on the floor of the halls to catch rainwater dripping through the roof, the long dimly lit hallways, and the gongs tolling to announce the beginning and end of each examination period.

Over the years, the oral examinations became more and more uniform; each examiner in a category showed the same group of cases, which were changed every half day. Scoring ranged from 68 to 72; to pass a category, the average score on all the cases had to be 70 or greater. By

the time the oral examination ended, there were 11 categories: musculoskeletal, thoracic, gastrointestinal, genitourinary, interventional, neuroradiology, pediatric radiology, ultrasound, nuclear medicine, and breast imaging, as well as a virtual category in cardiac radiology (composed of cases delivered during the thoracic interventional, nuclear medicine, and pediatric examinations). A candidate could fail up to three categories and "condition" the exam in those categories. The complete examination was given each June near the end of residency training, and the examination for those who conditioned was given in November. The oral examination was seen as a "rite of passage" by several generations of diagnostic radiologists.

Despite the increasing standardization of the examination process, the Board of Trustees was concerned that there was no possibility that one candidate's examination was identical to that of another. The same case could be presented by two examiners in different ways; comments of a candidate would lead the discussion in one direction, but different comments by another candidate would lead the discussion in another. In addition, it was clear that some candidates were made so nervous by facing another radiologist that they could not do as well as they might have under different circumstances.

After several years of discussion, the trustees made the monumental decision in 2007 to develop two new computer-based examinations—the Core Examination and the Certifying Examination—to replace the "written" and oral examinations. This decision had far-reaching implications for candidates as well as for the ABR, which had to 1) establish two exam centers, in Tucson and Chicago, which were compatible with delivering a high-stakes exam in a secure environment; 2) develop a software platform to deliver the exam; and 3) recruit hundreds of volunteers to write exam questions.

The Core Examination was first delivered to candidates for scoring in October 2013. Prior to that time, however, it had already been given twice. At the June 2012 oral exam, candidates were given the opportunity to take one or two modules of the Core Examination in categories of their choosing, thus allowing the ABR to test the items and the software-delivery platform. To encourage candidates to spend extra time taking another examination, the ABR offered to raise a candidate's score to passing in a failed oral exam category if he or she passed the same category of the Core Examination. Most candidates decided that it was an offer worth taking. The number of candidates with a raised score was small, however, because candidates were typically unable to "guess" which category they had failed and often chose a Core Exam category that they had actually passed.

In June 2013, candidates who were eligible to take the first administration of the Core Examination in October 2014 were able to participate in a "practice exam." This gave the ABR an opportunity to "practice" giving the examination to more than 1,000 candidates in its Chicago and Tucson exam centers. In addition, candidates had a chance to "practice" taking an exam that was comparable to the exam they would be taking later that year. Both groups learned a lot!

The Core Examination has now been delivered five times. A resident must take the exam after 36 months of diagnostic radiology training; an alternate pathway candidate is eligible for the examination after 36 months of training as well. Few exceptions to these requirements have been granted. The pass rate for first-time takers has ranged from 87 to 91 percent, while 8 to 12 percent of candidates have failed. One percent of candidates have conditioned the examination by failing physics; all these candidates have subsequently passed this category on a repeat examination. More details about the examination can be found on the ABR website at http://www.theabr.org/ic-dr-core-exam.

The Certifying Examination was given for the first time in October 2015. Candidates were eligible for this examination 15 months after finishing residency. The ABR chose this time frame in order to 1) free up the fourth year of residency training without the encumbrance of a looming examination in hopes that many residents would choose additional subspecialty training during their fourth year; 2) avoid an examination during the fellowship year so candidates could concentrate on their fellowships; and 3) avoid the first few months after finishing a fellowship so candidates could settle into a new practice, often in a new part of the country.

Because the Certifying Exam questions are the same as those on the Maintenance of Certification (MOC) examination, no trial runs were required. The pass rate for those who took the exam after passing the Core was a surprising 100 percent; it was lower for those who transitioned to the Certifying Examination after conditioning one to three categories on the last oral exam. The reason for the high pass rate is likely multifactorial: Candidates were able to choose their clinical practice areas (60 percent of the exam) based on their practice and/or fellowship experience, they studied hard, and most were only three months out of a fellowship. More details about the examination can be found on the ABR website at http://www.theabr.org/ic-dr-certifying-exam.

This change in examination paradigm has been a big one, both for the ABR and for the candidates being examined. Hopefully, this brief history of ABR examinations will help in understanding the most recent changes. The ABR is constantly trying to improve the initial certification examinations so that they remain reliable and valid, fair to the candidates, and reassuring to the public that those who attain ABR certification have undergone a rigorous process.

Acknowledgement: Much of the historical information in this article was taken from *The American Board of Radiology: 75 Years of Serving the Public,* by Otha W. Linton, MSJ, published in 2009.

Focus on Interventional Radiology

The New IR Training Pathways

2016;9[1]:14-16

by James B. Spies, MD, MPH, ABR Trustee

In November 2015, the ACGME approved the first eight interventional radiology (IR) residencies, the vanguard of a new training paradigm for the specialty. In the months ahead, more programs will complete the application process and will be approved, and it is anticipated that more than 30 programs will be able to participate in the match for the new IR residency in March 2017.

In reflecting on this milestone moment, it is useful to consider the dynamics within medicine that have led to the creation of this new program. It is the culmination of more than a decade of efforts by leaders in radiology, working to create a stronger training program—one designed to meet the challenges of today's practice. This effort has been driven by the desire to improve training in interventional procedures and patient care, particularly in the increasingly complex environment of current medical practice.

Why the change in interventional radiology training?

Since its beginning, IR has been characterized by innovation, applying ingenuity and creativity to treat a range of clinical conditions with minimally invasive techniques. These techniques have revolutionized care, but have also challenged IRs to provide clinical management that matches the sophisticated treatments. Clinical care has not been a central part of IR training in the past. In recent years, this has begun to change, but the short duration of IR fellowships limits the exposure that trainees can have to clinical care. Over the past two decades, many new therapies have been developed that necessitate clinical expertise in outpatient evaluation and management. Uterine embolization, chemoembolization, radioembolization, tumor ablation, and vertebroplasty are just a few examples of therapies that require sophisticated clinical knowledge—knowledge that will guide appropriate outpatient evaluation, consultation, periprocedural care, and follow-up management.

It is essential that IRs understand the clinical context of their procedures, including the alternative treatments and the relative benefits or limitations of various approaches to managing a range of clinical conditions. In addition, IR is playing a progressively more central

role in treating clinical emergencies in critically ill patients. Modern hospitals cannot function without interventional services in the care of acutely ill patients. To contribute safely to the care of these patients, IRs need experience in assessing and managing ICU patients. The need to train IRs in clinical care to a level of expertise that matches the sophistication of our procedures has been the driving force behind the effort to change our training program.

Another important goal was to increase the procedural experience. IR procedures have become progressively more diverse, complex, and technically challenging. Twelve months of fellowship training simply does not provide enough experience to ensure competence in the range of IR procedures. Extending IR training to two years allows for improved clinical care training and greater procedural experience.

Pathways to Interventional Radiology

In designing the new IR training program, it was important to provide flexibility to academic radiology departments in adopting the new pathways. It was recognized that currently, there is a wide range of training programs, with some departments having very large complements of fellows and others having just one fellow. Many radiology residencies do not have affiliated fellowships, and some fellowships are independent, with only a fairly loose affiliation to a residency. It was also essential to ensure that there were pathways into IR for the range of trainees, from those who are committed to IR at the time of their medical school match to those who decide to pursue the field mid-residency, or even after completing a residency.

Common to all the pathways is the requirement for completing three years of diagnostic imaging training, including the requirements for breast imaging and nuclear medicine, and completion of the Core Examination after the third year of diagnostic imaging training (end of PGY 4). Each also must provide the requisite duration of IR training (two years, including clinical training and a month of ICU training). Candidates in each pathway will be required to complete a clinical internship, which can be attached to the residency or matched separately. The means and timing of entry into the IR residency is the primary difference in the pathways, which are explained in more detail below.

The Integrated Pathway

This pathway is designed for candidates who are committed to interventional training in their senior year of medical school. They will be selected through the match as they graduate from medical school. The integrated radiology training will begin in PGY 2, and PGY 2-4 will be identical to training currently taken by diagnostic radiology residents. These candidates will take the same Core Examination as DR residents. PGY 5 and 6 will be dedicated to IR-related training (with allowance for any remaining DR requirements in breast or nuclear imaging). All of this pathway is completed in the same institution, and the graduates will sit for their Certifying Examination three months after completing the program.

The Independent Pathway

This pathway is a one- or two-year program, depending on whether the candidates have completed an Early Start in Interventional Radiology (ESIR) program (see below). Candidates will be required to have completed a diagnostic radiology program, which may or may not include ESIR training. Once in the training pathway, they will complete the IR requirements (including one rotation in the ICU) and be certified in the same fashion as integrated candidates, three months after completion of the pathway. This pathway is ideal for those who decide on a career in IR after beginning radiology residency. Independent candidates seeking to matriculate at the end of their residencies will be selected via the match in PGY 3. If a trainee enters an independent residency after completing an ESIR program, this pathway would be one year. If an ESIR program has not been completed, the independent pathway would be two years.

Early Start in Interventional Radiology (ESIR)

The ESIR program is designed to allow diagnostic radiology residents to begin IR training in PGY 5 of a diagnostic radiology residency program. Any accredited radiology residency program can offer this program, regardless of whether it currently has an IR fellowship or whether it plans to have an IR residency. This pathway is an important addition to the two-pathway approach, as it allows those trainees in residencies that do not offer an IR program the opportunity to begin training in one program, complete an additional year in an independent IR program at another institution, and meet the criteria for certification in five years, rather than six.

The new training pathways offer a complete range of entry points into IR and allow trainees from any program or background the opportunity to become a part of this exciting specialty. We have entered a new era of IR training, one that will see practitioners better prepared to face the challenges of future practice.

Focus on Radiation Oncology

Past, Present, and Future of the Radiation Oncology Specialty

2016;9[1]:17-19

by Paul E. Wallner, DO; Dennis C. Shrieve, MD, PhD; and Anthony L. Zietman, MD

In anticipation of the October 2015 meeting of the ABR Board of Governors (BOG) and Board of Trustees (BOT), we were asked to prepare an overview of the state of radiation oncology, including challenges and opportunities that face the specialty in the coming decade as they might relate to initial certification (IC) and Maintenance of Certification (MOC) development and programming. The request provided an opportunity for a review of the dramatic changes in the specialty over the past 100-plus years, and how those changes have impacted IC and, more recently, MOC.

As a primary specialty of medicine, radiation oncology is fairly "young," but its clinical and scientific roots extend back to the latter part of the 19th century, shortly after the discovery of radiation, and shortly thereafter, the discovery of radium and polonium by the Curies. An early empirical observation was that radiation, especially when applied directly to tumors in the form of brachytherapy, had a profound effect on tumor (and normal) tissue. Many subsequent radiation-related interventions through the early 1950s were related to surgical procedures involving brachytherapy or orthovoltage (energy levels up to 300kVp) external beam radiation.

The discipline of therapeutic radiology, as it was then known, was dominated by surgeons, and surgery and radiation therapy, often in combination, were the only modalities capable of definitive cancer treatment. No dedicated training programs existed in the U.S., and what training did exist was typically embedded as relatively brief rotations within diagnostic radiology programs. Biologic concepts of radiation effect were related primarily to macroscopic and light microscopic observations of tumor and normal tissue response to radiation. Physics observations were directed to calculations of machine output and delivered doses, as well as a variety of brachytherapy calculation regimens, almost exclusively related to rigid radium or cesium sources. Radiation-related items in early certification examinations clearly reflected this limited knowledge base and practice patterns.

In the early 1950s, ^{60}Co teletherapy devices were introduced. These units were capable of delivering megavoltage (greater than 1 million volts) radiation in the clinic setting, with

improved depth dose, large field size capability, and skin-sparing characteristics; this stimulated a renewed interest in the incorporation of radiation into routine cancer care. There was a sharp increase in the number of physicians limiting their clinical interest to radiation therapy, in physicists committed to radiation therapy delivery, and in radiation biologists investigating the impact of radiation at the cellular level in malignant and normal tissues. In 1958 the first dedicated radiation therapy program was founded, and in 1967 the first independent department of radiation therapy was created. Consistent with this change, the ABR increased the basic science components of IC examinations and emphasized the role of radiation in the therapy of many cancers.

By 1968 there were 59 training programs in radiation therapy with 92 trainees, but certification was still typically combined in "general radiology" programs. In 1975 the Accreditation Council for Graduate Medical Education (ACGME) determined that radiation therapy should be a stand-alone training program, and the ABR responded by developing a separate primary certificate, which thereafter was designated as "radiation oncology." The 1970s proved to be watershed years for radiation oncology and for ABR testing in the specialty. The widespread introduction of medical linear accelerators with superior beam characteristics, CT scanners for three-dimensional imaging of tumor volumes, and dedicated radiation treatment-planning computer systems added the dimension of rapid evaluation of a variety of improved treatment plans. Radiation oncologists were able to deliver increasing doses to tumor targets with greater ability to protect surrounding normal tissues.

Around the same time, medical oncologists were beginning to introduce multi-agent cyto-reductive and cyto-toxic regimens that enhanced radiation response, but regrettably, often in both malignant and normal tissues. Many of these changes in the clinic, associated with a significant increase in radiation biology training and research funding, stimulated a new generation of dedicated radiation biologists to begin to explore the effects of radiation at the subcellular level. Adapting to these developments, the ABR intensified its IC testing in complex multimodality therapy management, including combined modality toxicities, sophisticated treatment-planning methods, and a greater level of imaging knowledge.

By the 1990s, there were new isotopes for low dose-rate brachytherapy, miniaturized sources and novel delivery systems for high dose-rate brachytherapy, and sophisticated computer-controlled linear accelerators capable of delivering intensity-modulated radiation therapy (IMRT). Concomitant introduction of a new generation of systemic chemotherapy and biological therapy agents, and a reduction in employment of some "radical" surgical procedures in favor of radiation and systemic agents, increased the necessity for new levels of knowledge and skills by radiation oncology trainees. The ABR responded accordingly, with greater emphasis on these combined approaches and their underlying basic science principles.

The early years of the 21st century have seen many significant changes in the discipline, including an increased interest in particle beam radiation (particularly protons); stereotactic body radiation therapy (SBRT) and stereotactic radiosurgery (SRS) employing smaller, more focused beams with significantly higher daily doses and shorter treatment courses; image-guided and respiratory-gated treatment delivery; and, in 2003, mapping of the human genome,

which introduced the disciplines of genomics and proteomics into the clinic. To adapt to these advances, the ABR's radiation and cancer biology exam items were strengthened to include the new discoveries and their impact on cancer management, physics items were broadened to include the new technologies and their quality assurance and safety requirements, and clinical material was adapted to the new realities of combined management, using biological agents and genetic signaling pathway modifiers. There was also a greater emphasis on identification of normal and pathologic anatomy.

Looking toward the future, big changes are ahead in the evolution of radiation oncology. The emphasis on ablative therapies is increasing, and the use of imaging, not only for initial field design but now for daily targeting, is changing the shape of practice. Radiographic anatomy will, more than ever, be emphasized in practice and in our examinations. Changes in the curriculum may be necessary to mandate this within training, but for now, ABR examiners are emphasizing it in both the computer-based "written" and oral examinations.

Another challenge will be to test radiation oncologists on the basic skill that is most required in everyday modern practice. This is the art of drawing target volumes and identifying normal structures in three, and in some cases four (if time is included), dimensions. At present the ABR does not have a strategy for practice simulation but it has, in recent years, worked with vendors to identify software that can test these skills and consistently provide metrics by which they can be judged. More than anything, we can envisage the capacity to evaluate this skill in both the IC and MOC examinations, which will make the exams truly relevant to practitioners.

Another critical evolution has been the movement toward practice within multidisciplinary teams. Radiation oncologists are now as likely to work and see patients in cancer centers as they are in traditional radiation oncology departments. More than ever, they need to fluently speak the language of the surgeons and medical oncologists with whom they work in order to avoid being marginalized in the future. This is recognized at a political level (the specialty societies) and is much discussed by the ABR trustees. A thorough understanding of the drugs used in cancer care and the details of common surgeries will be tested during the ABR certification process.

Radiation oncology continues to be a vibrant and growing discipline, attracting high-quality trainees, many with nonmedical doctoral degrees and other advanced training. The trainee pool continues to be among the strongest in medicine. There are currently 89 ACGME-accredited radiation oncology training programs with 777 available resident slots, most of which are filled each year. As the field changes, with advances in our understanding of emerging technologies, their physical and biological implications, and the relationship of radiation to other evolving interventions, the ABR will continue to modify its examinations to meet these changes.

Focus on Medical Physics

Medical Physics and ABR Certification

2016;9[1]:20-25

by Geoffrey S. Ibbott, PhD, and G. Donald Frey, PhD

The American Association of Physicists in Medicine (AAPM) estimates that there are 6,800 practicing medical physicists in the U.S. Membership in the AAPM is open to scientists and others who have an interest in the field, and who practice in settings that involve medical physics work. Membership is not restricted to those with degrees or certification in medical physics, and as a result, there is a wide variation in educational background, clinical experience, qualifications, and career goals among AAPM members. There are others who identify themselves as medical physicists but who are not members of the AAPM. All this makes it somewhat difficult to characterize the profession, but this article is an attempt to do so.

According to the AAPM, the majority (75 percent) of medical physicists work fully or primarily in radiation therapy. (See Figure 1. Source, AAPM Annual Professional Survey). Only 70 percent report that they are certified by the ABR, the American Board of Medical Physics, the Canadian College of Physicists in Medicine, or another board. Approximately the same number (69 percent) say that they work primarily in clinical activities, with 22 percent working in research and 9 percent who are primarily administrators.

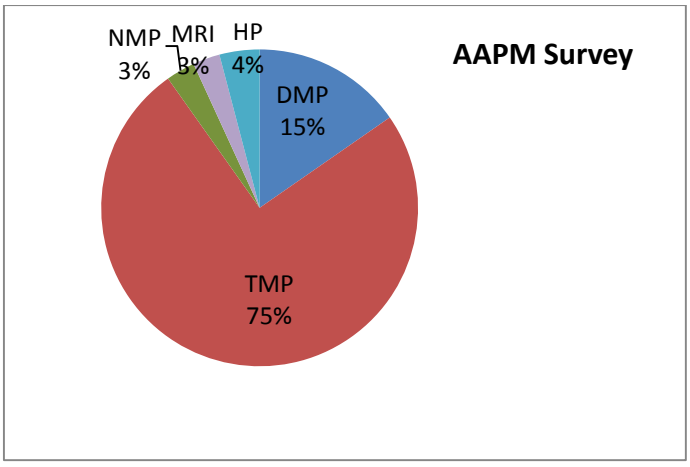

Figure 1: Distribution of medical physicist specialization, according to the AAPM

We tend to think of medical physics as a profession, where a profession is distinguished from an occupation by having the following characteristics:

- Standardized education
- Accreditation of educational programs
- Certification of practitioners
- Professional standards
- Licensure

In the case of medical physics, the following descriptions apply:

- The AAPM has described a standardized educational path as beginning with a thorough preparation in undergraduate physics, followed by graduate education leading to a master's or doctoral degree and including medical physics coursework. The academic training must be followed by practical experience through a residency traineeship or a postdoctoral fellowship.
- Medical physics educational programs are accredited by the Commission on Accreditation of Medical Physics Education Programs (CAMPEP). CAMPEP accredits graduate educational programs leading to a degree, so-called "certificate" programs intended to provide medical physics education to people who already hold a graduate degree in another field, and residency programs.
- The RSNA offered certification of medical physicists beginning in 1934, and this responsibility was transferred to the ABR after World War II. The ABR certification program is the most widely recognized and respected certification program for medical physicists. The ABR is one of only two boards of the American Board of Medical Specialties (ABMS) that certifies nonphysicians; the American Board of Medical Genetics is the other.
- The AAPM has developed professional standards, including a Code of Ethics. Membership requires applicants to attest that they will uphold the Code of Ethics.
- Only four states offer licensure of medical physicists: New York, Florida, Texas, and Hawaii. Several other states maintain registries of qualified medical physicists, but these registries do not carry the legal force of licensure.

Until recently, the pathways that brought people into the profession were extremely varied. In the early years, physicists were recruited from classical university physics positions and were enticed by supplements to their salaries from clinical revenue. Most were trained on the job, and many had to teach themselves. Beginning in the 1960s, specialized graduate medical physics training programs were developed, but still, many medical physicists received only formal classical physics education, combined with clinical training in postdoctoral fellowships or more informal positions. Consequently, the quality and level of training and experience that many medical physics trainees received varied from intensive to almost nothing.

More recently, the need to standardize the training of medical physicists led to the development of CAMPEP. CAMPEP developed curriculum standards and an accreditation process, and today, most medical physics graduate programs are accredited.

Even more recently, CAMPEP published standards for medical physics residencies, and now approximately 100 residents complete their training in accredited residency programs each year. Most programs now participate in a residency match, modeled after diagnostic radiology and radiation oncology match programs. Today, however, there is a large imbalance between the output of graduate programs and the capacity of residency programs; therefore, in 2015, of 402 graduates who registered for the match, 122 withdrew. Of the remaining 280, only 108 (39 percent) matched. This imbalance is expected to worsen in coming years as graduates who didn't match in 2015 attempt again in 2016.

The introduction of educational standards and the development of CAMPEP has enabled the ABR to rely on compliance with these standards, rather than have to impose its own standards on candidates for certification. As a result, the requirements for ABR certification in medical physics now include the following:

- A BS or graduate degree in physics, or coursework equivalent to an undergraduate minor in classical physics
- A graduate degree from a CAMPEP-accredited medical physics program
- Two years of clinical training in a CAMPEP-accredited residency program

Several alternatives to the above exist:

- Candidates who registered for the ABR Part 1 exam prior to 2013 are permitted to obtain 36 months of on-the-job training as an alternative to completing a residency.
- Candidates with graduate degrees in classical physics can complete the necessary minimum medical physics coursework in a CAMPEP-accredited graduate program without enrolling as degree students. They may then be admitted to a residency program.
- A few universities have developed programs that combine two years of graduate coursework with a two-year residency, culminating in a professional doctoral degree (called Doctor of Medical Physics – DMP).
- Medical physicists who were trained in a foreign country, worked there for at least a year, and received recognition as qualified to practice in that country can enter a "structured mentorship" in the U.S. This is a supervised program of at least 36 months' duration that embodies the elements of a residency program.

Certification in Medical Physics

Certification in medical physics comprises a sequence of three exams. The exams are designed to test "book" knowledge obtained in a graduate program, clinical training obtained in a residency or through on-the-job experience, and the ability of the candidate to communicate his or her knowledge about clinical situations.

Part 1 Exam

The Part 1 exam is a computerized exam administered at testing centers run by Pearson VUE, a commercial testing company. Pearson VUE operates at least one testing center in each major city, and in many cases, several testing centers are available. The exam consists of multiple-choice questions, each with a single correct answer.

To qualify to take the Part 1 exam, candidates must either:

- be enrolled in, or have completed, a CAMPEP-accredited educational program, or
- have completed a structured mentorship (applies to international medical physicists only).

The Part 1 exam has two subparts: a general medical physics exam and a clinical exam that tests knowledge of anatomy, physiology, and radiation biology. Candidates who fail the general medical physics exam must retake both exams in a subsequent year, but candidates who fail only the clinical exam may retake only the clinical exam. Candidates have five years from the date of original registration and admission to Part 1 to pass both subparts of the Part 1 exam. Failure to do so requires completing another year of education in a CAMPEP-accredited program and reregistration for Part 1. (See Figure 2.)

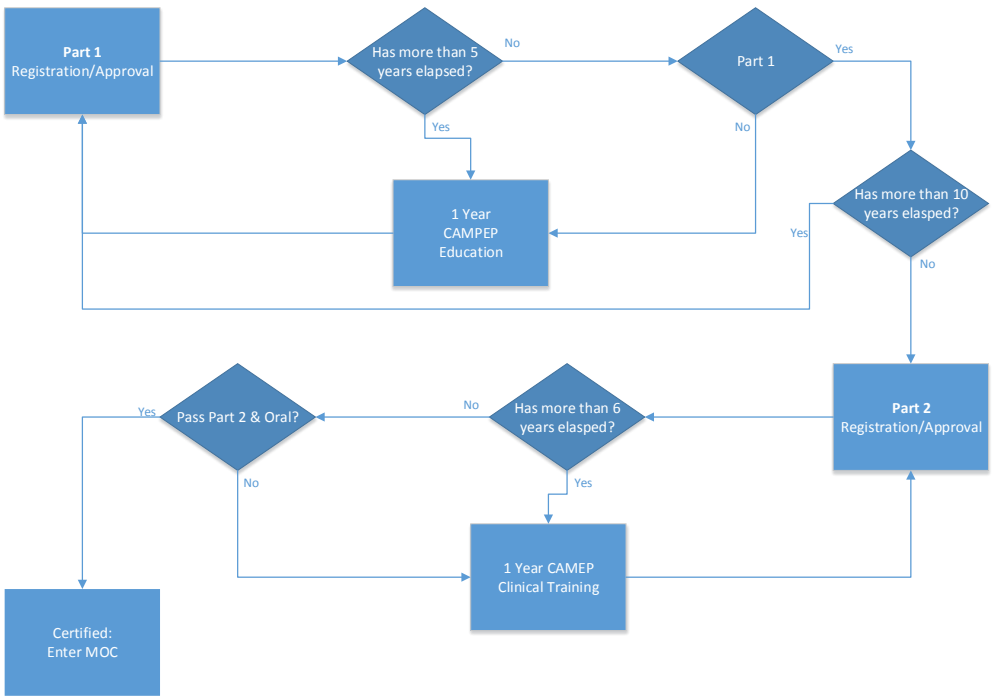

Figure 2: The ABR physics exams and allowable time between steps in the certification process.

Part 2 Exam

The Part 2 exam is also a computerized exam administered at Pearson VUE centers. It consists of 80 multiple-choice questions, of which 53 are "simple" questions: the answer requires either a single calculation or one item of knowledge. The remaining 27 items are "complex" and generally require multiple steps or multiple calculations. Each complex item has three times the value of a simple item. Unique Part 2 exams are administered for each of the three medical physics certificates: therapeutic medical physics, diagnostic medical physics, and nuclear medical physics.

To qualify for the Part 2 exam, candidates must have passed the Part 1 exam no more than 10 years earlier. In addition, candidates must have completed a CAMPEP-accredited residency, 36 months of supervised clinical experience (candidates who registered before 2013), or a structured mentorship (international candidates only). Candidates who meet the residency training requirement become "board eligible" immediately. Consequently, it is possible to become board eligible before passing the Part 1 exam. Candidates in either of the other pathways must register for the Part 2 exam and be approved before becoming board eligible.

Oral Exam

Once a candidate successfully completes the Part 2 exam, he or she is automatically registered for the next administration of the oral exam. The oral exam is held each year in May or June in Louisville, Kentucky, and consists of five 30-minute sessions, each with a single examiner. The five examiners each ask one question from each of five categories. The categories are different for the three medical physics specializations.

Once a candidate is board eligible, he or she must become certified within six years. Failure to do so requires the candidate to complete an additional year of clinical training in a CAMPEP-accredited training program, and then register and be re-approved for the Part 2 exam (see Figure 2).

Related Boards and Organizations

In 1991, the American Board of Medical Physics (ABMP) was formed, and for about 10 years, it competed with the ABR for certification of medical physicists. In 2001, an agreement was reached, which called for the ABMP to discontinue certifying in fields that competed with the ABR. The ABR recognized ABMP diplomates by offering them a Letter of Certification Equivalency (LoCE) and the opportunity to enroll in ABR Maintenance of Certification (MOC). ABMP diplomates who received a LoCE and completed a 10-year cycle of ABR MOC could receive an ABR certificate. This program ended in 2015. Approximately 80 ABMP diplomates have chosen this route; others have chosen to maintain their ABMP certificates. The ABMP continues to certify candidates in MRI physics and medical health physics.

Several other boards also certify in fields related to medical physics. The American Board of Science in Nuclear Medicine (ABSNM) awards approximately the same number of certificates in nuclear medicine physics each year as does the ABR. The admission requirements are less

demanding because completion of a residency program is not required, but the ABSNM does have an MOC program.

A relatively new organization, the International Medical Physics Certification Board (IMPCB), was formed to provide guidance and support to medical physics organizations for the establishment of national medical physics certification boards, and to conduct board examinations for medical physicists in countries that have not yet established certification boards. Near the end of 2015, the IMPCB accredited national medical physics certification boards in Korea and Hong Kong.

In addition to regular meetings with the AAPM and with CAMPEP, the ABR physics trustees, the ABR physics governor, and the ABR associate executive director (AED) for medical physics meet with the Society of Directors of Academic Medical Physics Programs (SDAMPP) and the ACR's Medical Physics Commission. A Memorandum of Understanding was drawn up in August 2012, clarifying the roles of the four organizations most involved with education and training: ABR, AAPM, CAMPEP, and SDAMPP. (See Figure 3.)

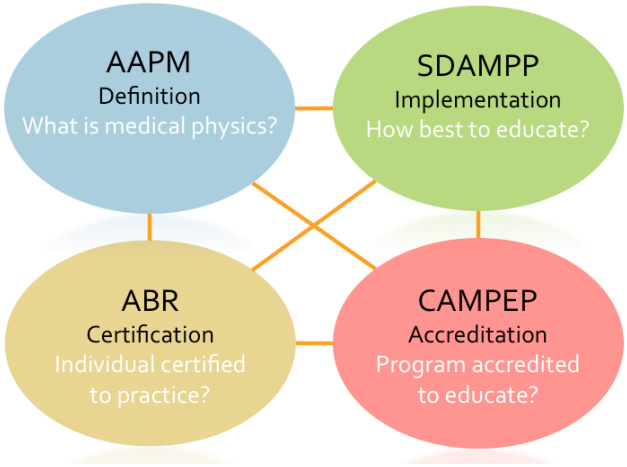

Figure 3: The relationships among the ABR, AAPM, SDAMPP, and CAMPEP.

Status and Future Developments

A recent challenge for the medical physics trustees, governor, and AED has been the large number of candidates seeking certification. Many of these candidates entered the certification pathway prior to the 2012 requirement for a CAMPEP-accredited education and the 2014 requirement for a CAMPEP-accredited residency. A large number of them are still making their way through the exam sequence, so the May 2016 oral exam will again bring many candidates to Louisville.

However, the 2012 and 2014 requirements have resulted in a reduced number of candidates for the Part 1 exam, and the limited number of residencies will control the number of new candidates entering the pathway in future years. The effect of a standardized education is now being seen in improved passing rates on all the exams, for candidates who received a CAMPEP-accredited graduate education and completed a CAMPEP-accredited clinical residency.

Spotlight on an MOC Participant

2016;9[1]:26-27

For this issue's "Spotlight on MOC" article, we interviewed **Dr. Mario E. Torres-León**, a diagnostic radiologist with numerous interests and entrepreneurial projects. We asked him to describe his experience with MOC, and he recounted the following story:

"In October 2015, I flew to Chicago for my 10-year MOC recertification examination. I must confess that I was quite intimidated by the process. I could only think about all the anecdotes that attendings, residents, and fellows had told about the Executive West (for those who had the pleasure of taking the Boards there). For months, it was as though I was reliving the spring of 2004 all over again! Could this really be happening? Well, I guess it could. Fortunately, the ABR's extremely kind and supportive staff was there to make the process easy and to guide me literally to the door of the hotel.

"Having gone through the process of initial board certification and Maintenance of Certification has been invaluable. We have chosen what, in my opinion, is the most intellectually challenging specialty in medicine. By virtue of this, the amount of material we must know is substantial and continues to increase. The MOC process allows us to get reacquainted with much of what we had to study and intimately know to initially pass the boards. While studying for the MOC exam, I was surprised by how much information I was able to recall, even though I had not seen it in years. That was reassuring! I chose to define the preparation process as a way to recommit to patients and an important opportunity to polish my skills. Having practiced for 10 years gave me a unique perspective for the exam and a degree of appreciation for my specialty that I did not have in 2004.

"I believe it is essential that all of us who intend to continue to practice go through the process of MOC. In the post-MOC-exam months, I have come across cases I studied for the exam, and my recall and interpretative skills have improved as a product of the recent study time. Ultimately, this has a direct positive impact on patient care and increases referring clinicians' perceived value of our services.

"As part of the MOC requirements, I was involved in the creation and leadership of a quality committee for my practice. In my experience, we tend to be sensitive to feedback, particularly when findings are missed or diagnoses are incorrect. During my years with the committee, I was in charge of tracking data and analyzing statistics generated by the use of the ACR's RadPeer system. This allowed the practice to take a closer look at those areas that required

improvement. Needless to say, I gained great insight, not just about the practice at large but also about my own deficiencies as a diagnostician. I believe this aspect of MOC gives the radiologist aspiring to recertify the opportunity to be creative and have the freedom to be his or her own navigator in the educational and continuous quality improvement process."

Dr. Torres-León obtained a medical degree from the University of Puerto Rico School of Medicine in San Juan. During medical school, he became fascinated with neurosurgery, but thanks to the advice of a mentor, he chose a different path where he could have greater exposure to a wider variety of subjects and clinical challenges. During his last year of medical school, he completed neuroradiology rotations at the Medical College of Georgia in Augusta and pediatric radiology rotations at Baylor University's Texas Children's Hospital in Houston. Those experiences crystallized his decision, and as he said, "the rest is history."

He went on to complete his transitional year internship through Columbia College of Physicians and Surgeons and a diagnostic radiology residency at Yale University. Upon completion of residency and acquiring ABR board certification, he left New Haven, Connecticut, for Boston, where he became the first Puerto Rican admitted to Harvard University's Massachusetts General Hospital's abdominal imaging and interventional radiology two-year fellowship training program.

Following completion of his formal training, Dr. Torres-León joined a private practice north of Boston, where he was instrumental in the growth and development of the interventional radiology (IR) practice, as well as the non-interventional diagnostic radiology services.

When we asked Dr. Torres-León what he likes to do in his spare time, he stated that his free time is for enjoying beautiful Durango, Colorado, with the loves of his life—his wife Kim and their three-year-old daughter Gemma.

In conclusion, he stated: "I would like to express my deepest sense of gratitude to all my mentors in my radiology career. They know who they are, and without them, the road would have been a different one. Lastly, I want to express my sincere thanks to the kind and caring leadership and support staff at the American Board of Radiology. Thanks for being friends on the other end of the phone, letters, or emails. Your roles are infinitely valuable and greatly appreciated!"

Reminder: Diagnostic Radiology Exam Fees

2016;9[1]:28

Beginning in 2016, registrants in Diagnostic Radiology (DR) programs will be required to pay their registration fees as part of the application process. Registration will open on July 1 and end on September 30. Late registration will be accepted from October 1 through October 31 with an additional late registration fee of $400.

Connections Center Staff Respond Quickly to Queries

2016;9[1]:29

A little over a year after implementing the Connections Center, the American Board of Radiology (ABR) has cut its turnaround time for resolution of issues from days or weeks to minutes and hours. This team of trained, customer-focused individuals is charged with providing timely, accurate, and consistent responses to inquiries. The team serves as the first tier of response to telephone calls and email messages from 7 a.m. to 5 p.m. (Arizona time) weekdays.

"They are able to answer most questions immediately, or forward the call or message to the appropriate ABR staff expert," said ABR Executive Director Valerie P. Jackson, MD. Each inquiry is tracked from initiation to resolution to ensure that nothing falls through the cracks, and responses are timely, that is, completed within one business day in most cases. Feedback from candidates and diplomates has been overwhelmingly positive, as reflected in the many compliments received by Connections Center staff.

"Many individuals are delighted at how quickly they are able to speak to a 'live' person, rather than listening to a long recording," Dr. Jackson stated. "Callers and emailers also have expressed their appreciation for the time that ABR staff members take to thoroughly explain and help them understand ABR information, or to walk them through an entire process over the phone."

Since its inception in September 2014, the Connections Center has received 27,454 inquiries: 15,530 by phone; 8,322 by email; 2,472 by FAX; and the remainder by postal mail (figures as of January 8, 2016).

An added benefit is that other ABR staff members are no longer taking time away from their primary duties to answer the "frequently asked" questions, such as how to reset one's password, Dr. Jackson noted. They are now able to complete other work and concentrate on more complex inquiries.

List of Society Attendance

2016;9[1]:30

The ABR sponsors a booth at numerous society meetings throughout the year. Printed materials are available, and ABR representatives are in attendance to answer your questions. To see a list of society meetings at which the ABR plans to have a booth in 2016, please click here.