# Transformative TIMES

## The Importance of Board Certification


THE AMERICAN BOARD OF RADIOLOGY
EXCELLENCE · PROFESSIONALISM · PUBLIC TRUST · EST. 1934

## ANNUAL REPORT 2012-2013

## ABR Purposes

- To serve patients and the public by continuously ensuring the competence of its diplomates.
- To improve the quality and safety of diagnostic radiology, interventional radiology, radiation oncology, and medical physics.
- To elevate the quality of graduate medical education in diagnostic radiology, interventional radiology, radiation oncology, and medical physics through its requirements for primary and subspecialty certification.
- To create and conduct fair and valid examinations in diagnostic radiology, interventional radiology, radiation oncology, and medical physics to accurately evaluate the qualifications of voluntary candidates for ABR certification.
- To issue certificates to qualified and competent candidates in the specialties and subspecialties of the ABR.
- To provide and administer programs for the Maintenance of Certification (MOC) of its diplomates.
- To ensure lifelong and continuous learning, professional growth, quality, and competence through its MOC programs.
- To promote professionalism within its disciplines.
- To establish and promote open and transparent multidirectional avenues of communication with its diplomates, medical societies, governmental and nongovernmental agencies, and the public.

## The Pillars of Our Profession

- Public trust: earned through standard setting in education and assessment since 1934
- Professional standing: credibility and stature with peers, patients, and the community
- Gold standard credential: universally recognized seal of excellence

## ABR Values

- Quality
- Competence
- Continuous learning
- Safety
- Communication
- Professionalism

## Contents



## ABR Mission

To serve patients, the public, and the medical profession by certifying that its diplomates have acquired, demonstrated, and maintained a requisite standard of knowledge, skill, understanding, and performance essential to the safe and competent practice of diagnostic radiology, interventional radiology, radiation oncology, and medical physics.

## ABR Vision

By 2020, the ABR will have advanced safety and quality in healthcare by setting the definitive professional standards for diagnostic radiology, interventional radiology, radiation oncology, and medical physics.

## Sponsoring Societies

American Association of Physicists in Medicine (AAPM)
American College of Radiology (ACR)
American Medical Association (AMA)
American Radium Society (ARS)
American Roentgen Ray Society (ARRS)
American Society for Radiation Oncology (ASTRO)
Association of University Radiologists (AUR)
Radiological Society of North America (RSNA)
Society of Interventional Radiology (SIR)

# A MESSAGE from the President

*James P. Borgstede, MD*

Transformational change in medicine is by definition rapid and dramatic, and it creates concern and uncertainty. The ABR's goal is both to promote and to assist our diplomates in this transformation. The ABR believes that transformation in healthcare will involve the ABR certification process. ABR diplomates, through their initial certification and Maintenance of Certification (MOC), have both demonstrated and continue to demonstrate that they can provide radiology care with skill and safety.

Why is transformational change in medicine necessary? Our healthcare system is unsustainable in its current form. Patients see benefits eroding, and both patients and businesses see costs rising. The Centers for Medicare and Medicaid Services (CMS) continues inappropriately to address rising costs in radiology for Medicare recipients with unit cost solutions to a volume problem. Private payers often follow the CMS lead regarding reimbursement. Patients, payers, the public, and providers of healthcare alike question whether they are receiving value for their investment in healthcare.

Value in healthcare is typically defined as a ratio of outcome to financial expenditure. Healthcare expenditures are approaching 20 percent of U.S. gross domestic product as baby boomers age. Therefore, changes in the payment system are inevitable. To patients and physicians, value simply equates to quality. Others involved in healthcare may inappropriately use quality as a surrogate simply to decrease cost and decrease reimbursement.

Regardless of one's perspective on value, quality, and cost, patients, payers, and the government are all demanding transformational rather than incremental changes, as well as a greater influence in healthcare to improve outcomes. The mission of the ABR is paramount in demonstrating quality to all players in the healthcare arena through our diplomates' initial certification and MOC. The remainder of this article addresses the ABR's role in demonstrating quality in an era of transformational change.

Examples of transformational changes to alter outcomes and financial expenditures in medicine include the National Qualities Strategy through the Affordable Care Act, Accountable Care Organizations, and patient-centric participatory healthcare. ABR certification integrates with all of these changes. Transformational examples specific to radiology include our greater responsibility to provide results to patients, reduced face-to-face interaction with referring physicians through Picture Archival and Communication Systems (PACS), and growing apprehension regarding the safe and effective use of radiation and imaging tests. Patients and/or referring physicians question whether an imaging examination was performed and interpreted appropriately, accurately, timely, and safely. In a patient-centric environment, by what metrics can patients and others confirm that their radiologist is practicing with quality? The answer is ABR certification, which exemplifies quality.

The ABR is responding to transformational change through changes in certification. The written and oral examinations in diagnostic radiology have been replaced with our new computer-based qualifying and certifying exams. The oral examination of 80 years ends in 2014. MOC, required for all diplomates certified since 2002, has transformed to Continuous Certification. There has been transformational growth in the number of lifetime certificate holders enrolling in MOC. An additional ABR transformation is the recent approval of interventional radiology/diagnostic radiology (IR/DR) as a fourth discipline, which joins the existing disciplines of diagnostic radiology, radiation oncology, and medical physics.

Payers, patients, credentialing organizations, and the public use ABR MOC not only for certification of quality, but also for associated bonus reimbursement payments and credentialing. Studies show a link between MOC and improved clinical performance and outcomes by participating physicians. Those physicians engaged in MOC activities have also

reported enhanced clinical competence, improved care processes, and the gathering of valuable patient feedback.

The ABR's goal is to assist our diplomates in meeting the many transformational requirements for certification, credentialing, and reimbursement with "one-stop shopping," where participation in the ABR MOC process will be accepted by everyone for institutional credentialing, bonus reimbursement by CMS, and private payer credentialing, and by our patients and the public as a demonstration that their ABR-certified diagnostic radiologist, interventional radiologist, radiation oncologist, or medical physicist is providing quality care. A first step in one-stop shopping has been accomplished with CMS acceptance of ABR MOC participation for a portion of CMS bonus payments since 2011.

***The status quo is not an option. We can be leaders of transformational change or passive recipients of changes made by others.***

Challenges for both the ABR and our diplomates are inherent in transformational changes. One challenge is cultural. For nearly 70 years of the ABR's existence (1934-2000), it examined candidates; and those candidates who were certified never again interacted with the ABR. For radiologists to adapt to transformational changes, all ABR diplomates must embrace the current and future MOC expectations and imperatives of our patients, payers, credentialing organizations, and public interest groups. Through MOC Part 4 practice quality improvement projects, ABR-certified physicians and physicists demonstrate their value by improving outcomes through accurate and timely interpretations, timely interventions, and a commitment to radiation and other safety measures while also reducing costs. In other words, radiologists demonstrate that they accept the value equation, a ratio of outcome to financial expenditure, and meet its requirements.

A second challenge to meeting transformational changes is infrastructure. The ABR has invested heavily in information technology and staff to implement both MOC and our new initial certification process in diagnostic radiology. We also collaborate with radiology specialty societies through their development of registries, which can be used in Part 4 of MOC to document the quality of radiologists' care in a transformational environment. Some of these registries, listed below, already exist, and others are planned. Acceptance of these registries by payers and CMS is essential. Such registries must include the three key components of a radiologist's care, including accuracy of interpretation (ACR RADPEER is an existing registry example), timeliness of care, and safety of care (the ACR CT dose index registry is an existing example).

Diplomates are the ABR's most proximate stakeholders through which the Board can both assist and respond to healthcare transformation. It is through the Board's relationship with each of you that the ABR can be a transformational agent and assist you in addressing these inevitable changes. We must all understand and agree that current and future quality and financial imperatives in healthcare will demand that we embrace and support this transformed culture. The status quo is not an option. We can be leaders of transformational change or passive recipients of changes made by others. Transformation will occur with or without our participation and interaction. These changes are occurring everywhere in medicine. The viability of our specialty and its relevance to healthcare depends on our participation. The ABR will both lead and assist our diplomates in meeting the challenges of transformational change.

James P. Borgstede, MD
ABR President

# EXECUTIVE DIRECTOR'S Report

*Gary J. Becker, MD*

This is my last opportunity to share thoughts and perspectives with you in an ABR *Annual Report.* So I am going to keep it simple and short (for me, that is less than five pages). I am especially pleased that, fortuitously, this report's theme is "Transformative Times: The Importance of Board Certification." Why? Because it evokes thoughts of change, disruption, uncertainty, and a sense of trepidation, while at the same time, it offers the promise that ABR certification can provide a stabilizing influence and a solid foundation.

Some likely interpret "transformative times" with a sense of optimism and genuine excitement about technology, scientific discovery, etc. But I'd venture to say that most physicians interpret "transformative times" as a time of imminent change in healthcare in general and their practices in particular, owing to implementation of the Affordable Care Act. Reforms in healthcare delivery, payment, regulation, graduate medical education, etc., are just beginning to unfold. So much is still unknown, yet we all yearn for stability. How should you prepare? What choices will you make? How fateful will those choices be? What will become of your practice and your livelihood?

## The Social Contract

Stresses due to changing technology, automation, regulation, standardization, and dehumanization seem to conspire to adversely impact practice by threatening to crowd out the core principle of our medical professionalism: the social contract. We must never let this happen. More than anything else, we must remember that ***what sets us apart as medical professionals, in contrast to tradesmen, is the social contract that defines our relationship with the public. Through this contract, the public grants us the privilege to self-regulate. In exchange, each medical professional promises to place patient interests first, and to subordinate all other interests, including self-interests.*** By remaining cognizant of this simple yet profound principle, and by keeping it front and center at all times, we refuse to allow stresses and distractions to result in bad decision making. What role does the ABR play? ***With our voluntary initial certification and Maintenance of Certification (MOC) programs, the ABR, along with all the other ABMS specialty boards, provides the framework for medical professional self-regulation. By achieving and maintaining certification, each of us upholds the social contract.***

Your participation in ABR MOC (now known as Continuous Certification) upholds the social contract by demonstrating to the public that you have professional standing, engage in lifelong learning and self-assessment, have passed a secure examination, engage in practice assessment, and are committed to practice performance improvement. Through these activities, you maintain the six Core Competencies: professionalism, medical knowledge, patient care and procedural skills, interpersonal and communication skills, systems-based practice, and practice-based learning and improvement. In short, ***Continuous Certification helps each of you improve over a lifetime of medical practice, and all the while, informs the public of your efforts. Thus, it helps to maintain patient and public confidence in your knowledge, judgment, and skill.***

## Continuous Certification and Its Alignment with Other Requirements

The ABR Board of Trustees is well aware that our standards and requirements can improve patient care and health outcomes only if candidates for certification take our examinations, and diplomates of the ABR participate in our Continuous Certification programs. Let's concentrate on Continuous Certification for now since it hits closer to home for most of our readers.

The Board understands that participation in Continuous Certification depends on its perceived value to diplomates (the ABR's most proximate stakeholders), patients, credentialers, and other stakeholders. Perhaps the most obvious way to establish value for you, our diplomates, is by decreasing your burden through aligning Continuous Certification with federal reporting and hospital credentialing requirements, state license requirements, CMS incentives, The Joint Commission's Ongoing Professional Practice Evaluations (OPPEs), and other requirements. In other words, a highly

valued Continuous Certification program enables the diplomate who takes a single action to satisfy as many requirements as possible. ***The ABR Board of Trustees, executive staff, and senior staff leaders are committed to decreasing the burdens that diplomates must bear in contemporary practice during these transformative times.*** That is why the ABR has been a CMS-qualified Board in the MOC:PQRS Incentive Program for the past three years. It is also why we have recognized that group practice is the dominant practice model and have developed and published on the ABR website all the information you need to engage in group practice quality improvement, or PQI (see www.theabr.org/moc-dr-comp4 and www.theabr.org/moc-ro-comp4).

We understand that the practice burden extends to administrative support personnel, who must track licensure, CME, self-assessment, practice performance improvement activities, and examinations for many physicians. This led to development of the Group MOC administrative tool, which is now in beta-testing, and to the related Whole Practice MOC 10 percent discount. After the Group MOC tool becomes widely available in 2014, the Whole Practice MOC discount can begin.

The American Board of Medical Specialties (ABMS) has been deeply involved in an ongoing dialogue with the Federation of State Medical Boards (FSMB) concerning the development and implementation of Maintenance of Licensure (MOL). Currently, MOL implementation involves a series of pilots in various states. In all instances, meeting the requirements of MOC has been deemed satisfactory for meeting the requirements of MOL. Though it will take several years for all 70 jurisdictions under the FSMB umbrella to adopt MOL, we are now confident that the sufficiency of MOC to meet MOL requirements will be a key feature retained by all.

Finally, what matters most about MOC to patients, payers, and the government is the growing evidence that it is associated with superior quality of care, efficiency, and better outcomes (www.abms.org/EvidenceLibrary). While we should all be proud, we must also recognize that most of these studies involve internal medicine, cardiology, or surgery. Diagnostic radiology, radiation oncology, and medical physics (and soon, interventional radiology/diagnostic radiology) still have significant work ahead to establish their evidence base.

**Relevance of Continuous Certification to Practice**

Through emails, telephone calls, and questions at the society meetings, we frequently hear, "I would participate in MOC, if only it were relevant to my practice—especially the examination. Why can't I just be examined on what I do?" Actually, ABR's diagnostic radiology Continuous Certification exam is the most practice-profiled and therefore granular examination available among all 24 medical specialty boards. Indeed, it is on the cutting edge of this direction in specialty board exams. However, there are limits.

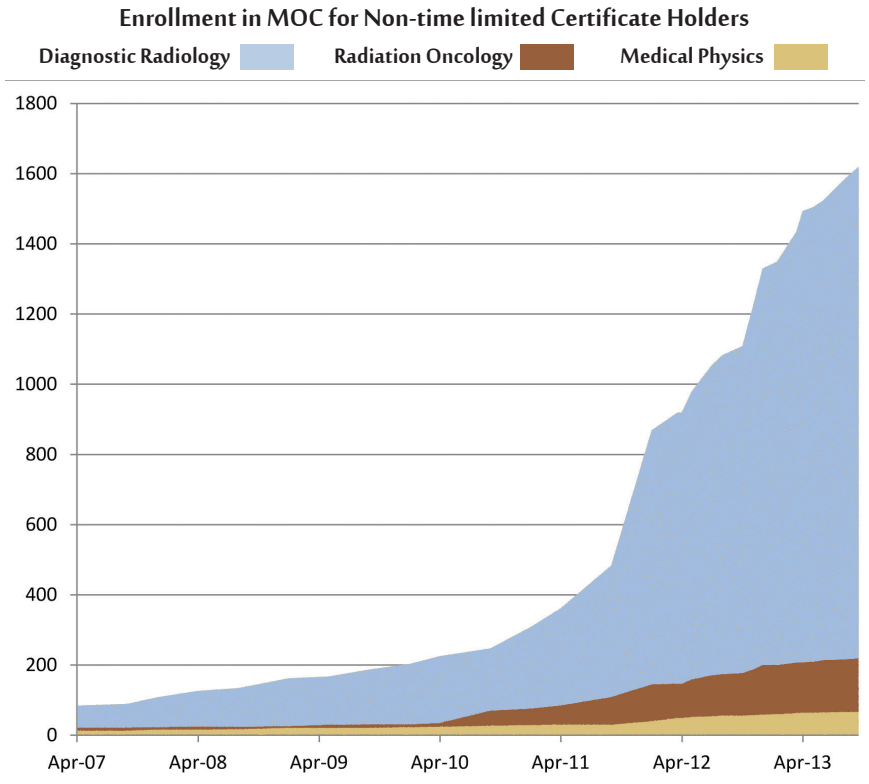
First, the ABR certifies in specialties and subspecialties that represent domains of practice. We cannot slice and dice these domains into smaller subunits (any thinner than we already do) and still represent to the public that our diplomates have demonstrated their knowledge, skill, and judgment in the full domain. Second, the more granular we go, the more difficult it is to populate exam committees, employ psychometrically sound procedures, and produce psychometrically valid and reliable results from our exams. For those who are wondering about examinations in the other disciplines, the radiation oncology trustees have also begun to plan the change to a practice-profiled Continuous Certification exam.

**myABR**

Earlier this year, the ABR replaced its Personal Database (PDB) with myABR, each diplomate's password-protected portal for all interaction with the ABR regarding his/her Continuous Certification. In myABR, each diplomate can track progress and complete attestations. All four components (licensure, CME and self-assessment CME, examination, and PQI) are included, although improvements and enhancements are still coming. In addition, optional programs such as MOC:PQRS are displayed. Those that are unique to a specific discipline (e.g., focused practice recognition in brachytherapy and focused practice recognition in cardiac CT) are displayed only to those diplomates with the requisite certification. In future releases, reminders and graphic depictions of progress will alert the diplomate to deficiencies requiring his/her attention in order to stay current. This site and the new public website, also released within the past year, are also simpler to navigate.

*(continued on next page)*

| Date | DR | RO | MP | All |
|---|---|---|---|---|
| Sep-13 | 1618 | 219 | 66 | 1903 |
| Aug-13 | 1580 | 216 | 66 | 1862 |
| Jun-13 | 1522 | 214 | 65 | 1801 |
| May-13 | 1503 | 209 | 64 | 1776 |
| Apr-13 | 1493 | 208 | 64 | 1765 |
| Mar-13 | 1434 | 207 | 63 | 1704 |
| Jan-13 | 1349 | 200 | 60 | 1609 |
| Dec-12 | 1329 | 200 | 59 | 1588 |
| Nov-12 | 1218 | 187 | 57 | 1462 |
| Oct-12 | 1108 | 177 | 56 | 1341 |
| Aug-12 | 1082 | 174 | 56 | 1312 |
| Jul-12 | 1054 | 171 | 54 | 1279 |
| May-12 | 979 | 159 | 52 | 1190 |
| Apr-12 | 919 | 147 | 49 | 1115 |
| Mar-12 | 919 | 147 | 49 | 1115 |
| Jan-12 | 868 | 145 | 40 | 1053 |
| Sep-11 | 483 | 109 | 30 | 622 |
| Apr-11 | 361 | 85 | 30 | 476 |
| Jan-11 | 308 | 76 | 29 | 413 |
| Sep-10 | 247 | 70 | 27 | 344 |
| Apr-10 | 225 | 35 | 24 | 284 |
| Jan-10 | 203 | 31 | 23 | 257 |
| Sep-09 | 187 | 31 | 21 | 239 |
| May-09 | 167 | 30 | 21 | 218 |
| Jan-09 | 162 | 26 | 21 | 209 |
| Aug-08 | 134 | 24 | 17 | 175 |
| Apr-08 | 126 | 25 | 16 | 167 |
| Dec-07 | 108 | 23 | 16 | 147 |
| Sep-07 | 89 | 22 | 13 | 124 |
| Apr-07 | 84 | 22 | 13 | 119 |




### The Evolution of MOC and Continuous Certification

We often receive questions that indicate a degree of frustration with one or more aspects of MOC. Sometimes the questioner wants to know why ABR and ABMS can't just get it all right the first time and then launch a program. Instead, it seems we change the rules every year. I have two responses. First, in more than two centuries of medicine in this country, board certification has existed for 80 years or less for most specialties. That means that our entire enterprise of professional self-regulation is comparatively young. Within this time, MOC has been a concept established by ABMS for only 13 years. The final approval of the MOC programs of the ABMS Member Boards was completed in 2006, and the ABR had all four components up and running in January 2007.

This means that the ABR has had its full offering available for less than seven years. Unsurprisingly, there have been frequent rule changes as the ABR got its bearings and worked to establish career-long relationships with its diplomates—something it never needed to do previously. Second, as of this past year, we have set in motion Continuous Certification, the framework that protects all of you from frequent changes and misapplied rules, makes the entire program more understandable, and prepares you and the ABR for the future. This is, in fact, a remarkable degree of progress in the few short years that we have had an ABMS-approved MOC program.

This is an auspicious time for the ABR to get the framework right. We are surpassing the point at which 50 percent of our diplomates are enrolled in MOC. As you can imagine, the number and percentage rise each year, as non-time-limited diplomates retire and are replaced by those in Continuous Certification. This increase will continue to occur over the next 15 years or so. Recently, there also has been a surge in non-time-limited diplomate enrollment in MOC, from only 119 in April 2007 to more than 1,900 in September 2013 (see chart above). Some of the increase is due to practice groups making the decision that all group members will participate in MOC because it is the right thing to do and because MOC will meet credentialing needs, eventually will satisfy licensing requirements, and will continue to be required for participation in certain federal incentive programs.

**Initial Certification**

The work of the ABR also fulfills the social contract through initial certification, which has made genuine progress over the past six years. The public experiences the benefit of ABR's initial certifying examinations when people who should not be certified fail the exams, and when those who should be certified pass them and enter Continuous Certification. This ideal outcome requires valid, reliable, and secure examinations, and it requires fairness on the part of the ABR. (More information on these topics is available in these articles: *Radiology* 2013;268(1):219-227, and *Int J Rad Onc Biol Phys* 2013;87(2):237-245.)

To this end, the ABR has done a great deal to strengthen its core competencies in testing and employs two full-time psychometricians. We have developed, together with Exam Design, Inc., an online question-banking system for use by our volunteers; organized our exam committee structure; strengthened our training of committee members; conducted practice analysis surveys that underpin the content validity of our exams; built two highly standardized exam centers—one in Chicago and the other in Tucson; and transitioned out of the oral examination in diagnostic radiology to our computer-based Core and Certifying Exams.

At the same time, we are maintaining and improving our oral exams in radiation oncology and medical physics, and over the next few years, we will be preparing examinations for the new interventional radiology/diagnostic radiology (IR/DR) certificate. We have also clarified our exam security policy and have made available an unprecedented number of tools for candidates to prepare for exams. In addition, we have codified our International Medical Graduate alternate pathway, offered accommodations in accordance with the Americans with Disabilities Act, and utilized our appeals process as specified in our policies.

As mentioned above, after more than six years in planning and development, the ABR has obtained ABMS approval to issue a fourth primary certificate: IR/DR. This new certificate will ensure that all future IR patients receive the safest, highest quality care. Now the structural and operational changes that must take place at the ABR to accommodate IR as our fourth primary discipline are being planned and undertaken.

**What You Don't See**

Many positive changes at the ABR that are invisible to you, our diplomates, have nonetheless been important to the integrity of the organization and the pursuit of its mission. A few of the more important ones have been the additions of an HR Division and a Standards Division (which includes Psychometrics, Imaging, and Communications/Editing) to the staff; the adoption of a project management approach to software development; the establishment of a Professionalism Committee within the Board of Trustees; and the development and nurturing of effective working relationships with ABMS, other Member Boards, the specialty societies, and government.

I am also especially proud to serve on the Board of Directors of the ABR Foundation, which is committed to demonstrating, enhancing, and continuously improving accountability to the public for the safe and appropriate use of medical imaging and radiation therapy. The ABRF's multi-stakeholder approach has fostered its recognition as a legitimate convener of important conversations and planning activities of key imaging stakeholders composed of nearly 70 organizations—from patients and consumers to professional societies, insurers, regulators, healthcare organizations, quality organizations, accrediting and certifying bodies, and many others. Several very important initiatives aimed at improving safety, appropriateness, and patient-centered approaches in medical imaging have been spawned at the three most recent ABRF Summits (August 2012, March 2013, August 2013).

**One More (Big) Thing**

In 2007, as a candidate for the ABR executive directorship, I was asked to identify the most important trend(s) that the ABR should monitor and prepare for because of their potential impact on the Board, patients, the public, and the profession. My answer was that the trend toward increasing transparency and accountability, which was already transforming the corporate world, would soon begin to impact the not-for-profit sector and become an overarching theme. We would need to be ready for this change. Until then, the ABR and most of the other specialty boards had been fortresses—insular institutions that were unas-

sailable. And why would we have expected anything else? Our Board administered exams, certified successful candidates, and then sent them on their way with a paper certificate and no need to ever again establish or maintain contact with the ABR. No one ever questioned what the Board decided or enacted. They simply accepted it.

In late 2009 and early 2010, our Board of Trustees, executive leadership, and office staff began to experience a great deal of pushback from young diplomates concerning many of our MOC policies and issues involving their implementation. Due to the growing demand for transparency and accountability, I was prepared for these challenges intellectually, but I was not yet prepared for their intensity. Along with the complaints, a great deal of anger was also being manifested.

The response of the trustees was one of the best examples of Board leadership I have witnessed during my tenure as executive director. We formed MOC advisory committees in diagnostic radiology, radiation oncology, and medical physics, predominantly composed of young, thoughtful MOC participants. These groups, which continue to meet by teleconference and face-to-face at annual meeting venues, instantly became a sounding board for some of the Board's ideas and a source of several ingenious ideas that the Board had never before considered. In essence, we established an invaluable two-way dialogue where, previously, only one-way communication had existed. As a result, we became much more transparent and held ourselves accountable as never before.

In keeping with this important trajectory, we have published annual reports like this one and have encouraged diplomates with problems or questions to call or email the office, to speak with us at the ABR booth at annual society meetings, and to interact with us on the new myABR.

Today's transparency and accountability extend not only to the specialty boards, but to their diplomates as well. While the specialty boards have always had a duty to publish lists of certified professionals, more recently we have begun—in accordance with an ABMS MOC standard—to publish on the ABR and ABMS websites which diplomates are meeting the requirements of MOC and which ones are not. CMS has future plans for its Physician Compare website to include even more robust and specific reporting.

***The important work of the ABR ensures that the members of our profession continue to enjoy the privilege of self-regulation.***

For its part, ABMS has also become more transparent and accountable. The ABMS Board of Directors has five public members, and a sixth will be added within the next year. In its proposed MOC standards for 2015, public input and review of the MOC program of each of the 24 Member Boards is required, and the proposed standards are available for public comment at http://standardspubliccomments.abms.org. Please take the time to review them and comment, so that your voice will be heard in the next set of MOC standards, which will be implemented in January 2015.

**Conclusion**

The important work of the ABR ensures that the members of our profession continue to enjoy the privilege of self-regulation. To guarantee that this privilege endures, we must all engage in lifelong professional development, with the ABR's Continuous Certification program as its framework. It has been an honor to serve as executive director of the ABR, and in the year ahead it will be an honor to continue to serve the specialty board movement, patients, the public, and the profession. It has also been a privilege to work with our outstanding staff, so many dedicated volunteers, and many incredible leaders on the Board of Trustees. The ABR is strong today, and it is ready for these transformative times.

# CERTIFICATION Statistics

| Number of General Certificates Issued by Decade (1930-2011) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year Founded | 1934-1939 | 1940-1949 | 1950-1959 | 1960-1969 | 1970-1979 | 1980-1989 | 1990-1999 | 2000-2009 | 2010-2011 | **TOTAL** |
| 1934 | 1,413 | 1,844 | 3,303 | 4,175 | 9,318 | 10,083 | 12,391 | 12,994 | 3,298 | **58,819** |

| General Certificates Issued 2002-2011 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | **TOTAL** |
| Diagnostic Radiology | 908 | 967 | 1,047 | 1,094 | 1,133 | 1,162 | 1,207 | 1,233 | 1,239 | 1,255 | 11,245 |
| Medical Physics | 113 | 112 | 97 | 135 | 141 | 136 | 200 | 204 | 204 | 313 | 1,655 |
| Radiation Oncology | 92 | 122 | 48 | 107 | 136 | 135 | 123 | 166 | 139 | 148 | 1,216 |
| **Total** | **1,113** | **1,201** | **1,192** | **1,336** | **1,410** | **1,433** | **1,530** | **1,603** | **1,582** | **1,716** | **14,116** |

| Subspecialty Certificates Issued 2002-2011 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | **TOTAL** |
| Hospice & Palliative Medicine* | --- | --- | --- | --- | --- | 0 | 9 | 0 | 11 | 0 | 20 |
| Neuroradiology | 114 | 65 | 86 | 81 | 134 | 139 | 148 | 158 | 167 | 185 | 1,277 |
| Nuclear Radiology | 6 | 6 | 7 | 7 | 4 | 2 | 3 | 2 | 5 | 7 | 49 |
| Pediatric Radiology | 19 | 16 | 17 | 28 | 24 | 31 | 34 | 41 | 40 | 53 | 303 |
| Vascular & Interventional Radiology | 147 | 82 | 98 | 77 | 74 | 88 | 81 | 103 | 98 | 117 | 965 |
| **Total** | **286** | **169** | **208** | **193** | **236** | **260** | **275** | **304** | **321** | **362** | **2,614** |

*Subspecialty approved in 2006; examinations offered every other year, beginning in 2008. Certificate administered by the American Board of Internal Medicine.

| Number of Diplomates Participating in Maintenance of Certification | | | | |
|---|---|---|---|---|
| | Diagnostic Radiology | Radiation Oncology | Medical Physics | **TOTAL** |
| Enrolled in MOC* | 19,164 (1,618) | 2,653 (219) | 2,218 (66) | **24,035 (1,903)** |

*As of September 18, 2013. Number of lifetime certificate holders in parentheses.

# PUTTING THE FOCUS on Focused Practice

In early 2011, the American Board of Medical Specialties (ABMS) approved the ABR's proposals to develop Maintenance of Certification (MOC) innovation pilot programs for Focused Practice Recognition in Brachytherapy (FPR-B) and in Cardiac CT (FPR-CCT). These are the only ABMS credentials in these two specialized areas of practice available through the ABMS and its Member Boards. They offer unique value previously unavailable through conventional ABMS pathways to primary and subspecialty certification.

Program implementation and active enrollment are taking place over a six-year period (2012-2017); the final year will include evaluations of the pilots with respect to their goals. Over the course of the pilot, the ABR will survey individual patients, members of the public, credentialers, referring physicians, diagnostic radiologists (FPR-CCT), and radiation oncologists (FPR-B) to determine the extent to which the benefits of ABR MOC with Focused Practice Recognition have been realized. We hope that after evaluation of the programs, the ABMS will approve them for permanent status.

Both programs are voluntary components of the existing ABR MOC program. FPR-B is designed to enable ABR radiation oncology diplomates who are enrolled in MOC and active in brachytherapy practice with certain minimum case volumes to achieve an added credential that demonstrates their expertise and commitment to quality and safety in brachytherapy. FPR-CCT is designed for diagnostic radiology diplomates who are enrolled in MOC and maintain a significant practice emphasis in cardiac CT to earn the added credential by further engaging in a program of continuous professional development. Through ABR Focused Practice Recognition, a physician can demonstrate his or her acquired knowledge, skills, and competence and receive appropriate recognition from patients, credentialers, peers, referring physicians, and others, including public reporting of the special status on the ABR and ABMS websites.

The first two ABR diplomates to earn Focused Practice Recognition in Brachytherapy and in Cardiac CT are, respectively, Lawrence D. Hochman, DO, a radiation oncologist who practices in New Port Richey, Florida, and Roderick Millan Zalamea, MD, a diagnostic radiologist who practices in Huntsville, Alabama.

***Lawrence Hochman, DO***

Dr. Hochman was trained in brachytherapy during his residency at Baylor College of Medicine in the early 1990s. Gynecologic brachytherapy, both high-dose and low-dose rate, was a fairly frequent procedure at Baylor. With regard to prostate brachytherapy, Baylor was unique at that time for using radioactive gold implants. In his first years of residency, Dr. Hochman conducted several implants using the old open technique and then transitioned to the more modern transperineal ultrasound-guided technique.

"During that time, I also participated in some uncommon brachytherapy procedures, including brain implants and CT-guided bone implants for palliation of metastatic disease. We used brachytherapy in the lung and esophagus as well as in the head and neck," he said.

When asked how he selects patients for brachytherapy, Dr. Hochman told us: "By carefully evaluating their clinical presentation and indication. Most brachytherapy I do today is limited to treatment of prostate, breast, gynecologic, and skin malignancies. The indications for gynecologic treatment are pretty clear; for prostate patients, we have a clear discussion of all the alternatives of treatment. Many prostate patients have heard about brachytherapy from a neighbor or friend and come in already interested. I look at age, stage, grade, and physical factors such as the size of the gland and pre-existing urologic symptoms. Then, with the urologist as part of the discussion, I make a recommendation for prostate brachytherapy in appropriate patients."

Dr. Hochman sees an increasing number of patients interested in breast brachytherapy, especially Accelerated Partial Breast Irradiation (APBI), a technique completed in five or fewer days, rather than five to seven weeks.

"Several local surgeons now have the expertise in referring potential patients," he said. "Some good published guidelines are out there, and I talk to patients about the options, risks, benefits, etc. If the patient is a candidate, we discuss with the surgeon the appropriate device choice for APBI. For patients with skin cancer, my first experiences with brachytherapy were with complex cases such as large areas of the scalp, less than amenable

for electron beam therapy. Today, for patients with small lesions, I will use a Leipzig or Valencia HDR (high-dose-rate) technique in place of electrons, especially if the patient is motivated to get through treatment rapidly."

Dr. Hochman finds that offering a variety of treatment techniques beyond external beam radiotherapy gives him the flexibility to treat patients with the best combination of effectiveness and convenience. For prostate cancer, treatment can be given in a day; for breast cancer, treatment can take place over a week. Patients appropriate for treatment with brachytherapy definitely appreciate the convenience.

"When I first heard about the focused practice program, I thought it was very interesting since I did a fair amount of brachytherapy and was already involved in MOC. I had done one of my PQI projects several years ago on my prostate brachytherapy experience, and it made me change some parameters that I used for treatment. I felt that having the FPR-B credential would set me apart from other radiation oncologists in the area who do not do nearly as much brachytherapy as I do. So far I have had several patients, as well as community members, approach me after reading a local article about this."

Brachytherapy is an excellent treatment option for appropriately selected patients. "The physicists that I work with," Dr. Hochman concluded, "are an important part of treatment planning and delivery and have a strong background in brachytherapy. This is very important!"

**Dr. Zalamea** began practicing cardiac CT in July 2008 in order to continue to support efforts that promote excellence in noninvasive imaging performance and interpretation. It has benefitted his practice by demonstrating to healthcare authorities his efforts in promoting quality radiologic practice.

***Roderick Zalamea, MD***

"Efforts such as this will help us position our practice favorably in the future of quality/outcomes-driven healthcare," he stated. He selects patients with clinical signs and symptoms of potential acute coronary syndrome (ACS), no findings of active myocardial infarction, and low-to-intermediate risk for coronary artery disease.

When asked how cardiac CT has benefitted his patients, Dr. Zalamea said, "It rules out coronary artery disease with high negative predictive value. Additionally, CCTA [cardiac computed tomography angiography] offers a noninvasive means of identifying patients who have coronary artery disease and would potentially benefit from aggressive medical therapy and secondary prevention. It does this by identifying coronary atherosclerosis that would otherwise be undetectable by stress myocardial perfusion imaging and catheter angiography.

"Current technologies allow the above at an extremely low and continually decreasing radiation dose. Recent robust clinical trial data support application of CCTA in evaluating low-to-intermediate risk patients with potential ACS who present to the emergency room. CCTA offers safe outcomes without traditional, often unnecessary, inpatient workup. Further, clinical data in patients with negative CCTA results demonstrate long-term safety without a significant major adverse cardiac event at least two years after initial CCTA."

Dr. Zalamea feels that both cardiac MRI and echocardiography have their uses and advantages. "Cardiac CT's distinct advantage is the ability to acquire highly detailed anatomic information of the cardiac and coronary structures and in a relatively short amount of time when compared with echocardiography and MRI. Further, cardiac CT has the ability to quantify coronary artery calcium and assess cardiovascular event risk."

It is debatable at this time whether CCTA is more cost-effective than traditional diagnostic methods, according to Dr. Zalamea. "It prevents excessive unnecessary multi-modality cardiac workup in patients in whom CCTA would exclude coronary atherosclerosis. However, CCTA, with its high sensitivity, also allows for identification of increasing numbers of patients with mild-to-moderate coronary atherosclerosis. In the end, medical therapy and secondary prevention would seem less economically burdensome upon the healthcare system than invasive procedures and coronary bypass surgeries."

Applications for and enrollment in these programs are made online through the diplomate's password-protected myABR account, accessible at https://myabr.theabr.org. For more information, please email fprb@theabr.org or fprcct@theabr.org.

# NEW TRUSTEES 2013

*The ABR welcomes the following new trustees, whose terms of service began on July 1, 2013. ABR trustees participate in leadership and decision making to carry out the ABR's mission and set standards for board certification in initial certification and Maintenance of Certification.*

**J. Anthony Seibert, PhD**, has been a professor of radiology and medical physics at the University of California Davis Medical Center since January 1983 and is currently associate chair of radiology informatics.

A diplomate of the ABR in diagnostic and therapeutic medical physics since 1986, Dr. Seibert has actively participated as a volunteer within the ABR since 1995 as an oral examiner, former chair of the Diagnostic Radiological Physics Exam Committee, and current member of the General Radiological Physics Exam Committee. He earned his undergraduate and graduate degrees from the University of California, Irvine.

Dr. Seibert is past president and chair of the American Association of Physicists in Medicine. He has received numerous honors, awards, and funded grants and also has been active in the American College of Radiology, the Radiological Society of North America, the Society for Imaging Informatics in Medicine, and the Institute of Electrical and Electronics Engineers. He assisted in the development and founding of the American Board of Imaging Informatics, where he is currently a member and chair of the Board of Trustees.

A prolific writer, Dr. Seibert is co-author of a popular physics text, *The Essential Physics of Medical Imaging*, and is extensively involved in physics education and training. He is credited with approximately 80 published papers and 100 published abstracts, as well as numerous book chapters. He recently served as associate editor and member of the editorial board for the journal *Radiology.*

**Stephen M. Hahn, MD**, is chair and Henry K. Pancoast professor of radiation oncology at the University of Pennsylvania.

A diplomate of the ABR in radiation oncology, Dr. Hahn is also certified in internal medicine and has been certified in medical oncology. As an expert in lung cancer, mediastinum cancer, and sarcoma, he has been an item submitter and an oral examiner for the ABR since 2009. He has also served as co-chair for the Initial Certification "Written" Exam Committee on the same topics.

Dr. Hahn earned his medical degree from Temple University School of Medicine and his undergraduate degrees from Rice University. In 1987, he completed his residency and served as chief resident of internal medicine at the University of California, San Francisco. He also completed a medical oncology fellowship at the National Cancer Institute (NCI) in 1991 and a radiation oncology residency at the NCI in 1994.

From 1993 to 1995, Dr. Hahn served as chief of the NCI's Prostate Cancer Clinic, Clinical Pharmacology Branch, in Bethesda, MD, and as a senior investigator at the NCI. He also served as a commander in the NCI's U.S. Public Health Service from 1989 to 1995.

A longstanding member of the American Society of Clinical Oncology, Dr. Hahn is also an active member of the Radiation Research Society, the American Society of Photobiology, the American Association for Cancer Research, and the University of Pennsylvania's John Morgan Society.

Dr. Hahn currently serves on the Board of Directors of the Radiation Oncology Institute. He has been recognized repeatedly by *Best Doctors in America* and *America's Top Doctors*.

# RETIRING TRUSTEES 2013

*The ABR thanks the following trustees, whose terms ended June 30, 2013. We greatly appreciate their many years of faithful and dedicated volunteer service.*

**Bruce G. Haffty, MD,** a board-certified radiation oncologist, was an ABR trustee from 2005 to 2013, president-elect from 2008 to 2010, and president from 2010 to 2012. During that time, he served on numerous committees within the ABR. He is currently professor and chairman, Department of Radiation Oncology, at the Robert Wood Johnson Medical School (RWJMS) of Rutgers University and associate director of the Cancer Institute of New Jersey.

Dr. Haffty spent most of his academic career at Yale School of Medicine in the Department of Therapeutic Radiology, where he was professor of therapeutic radiology, residency program director from 1992 to 2004, and vice-chairman and clinical director from 2002 to 2005. In 2005, he moved to the Cancer Institute of New Jersey and RWJMS, where he launched a new residency program in radiation oncology. He received the Cancer Institute of New Jersey's Leadership in Patient Care Recognition Award in 2008 and the RWJMS Norman Edelman Clinical Science Mentoring Award in 2009.

Dr. Haffty is internationally recognized as an expert in breast radiation oncology and has published more than 300 peer-reviewed articles, 30 book chapters, and numerous editorials and letters. Much of his recent research has been supported by the Breast Cancer Research Foundation. He is consistently listed as one of the country's leading physicians by *Best Doctors in America, Ladies Home Journal, Good Housekeeping, America's Top Doctors, Top Doctors for Cancer*, and *Top Doctors in New York and New Jersey*.

Dr. Haffty has also served on numerous national committees related to research and education in radiation oncology. He is a past president of the American Radium Society, past chairman of the ACGME Residency Review Committee, and founding president of the Association of Directors of Radiation Oncology Programs. He is associate editor of the *Journal of Clinical Oncology* and president-elect of the American Society for Radiation Oncology.

**Richard L. Morin, PhD,** who is board certified in both diagnostic medical physics and nuclear medical physics, is currently the Brooks-Hollern professor at Mayo Clinic in Jacksonville, Florida. He served as an ABR trustee from 2005 to 2013, as secretary-treasurer for two terms (2008-2010 and 2010-2012), and as chair of the ABR's Information Technology Advisory Committee (ITAC).

Dr. Morin is also chair of the American Board of Medical Specialties Database and IT Advisory Committee (DITAC); past president of the Florida Radiological Society; and chair of the Board of Trustees of the American Board of Imaging Informatics (ABII) and the American Association of Physicists in Medicine (AAPM). Dr. Morin received the American Roentgen Ray Society Gold Medal and the AAPM Coolidge Award in 2011 and the American College of Radiology Gold Medal in 2012.

Dr. Morin's research interests include electronic medical imaging, computers in medical imaging, cardiovascular CT, teleradiology, and the biological effects of radiation. As a former chair of the Society for Imaging Informatics in Medicine, he was among the first to articulate concerns about how radiology will be practiced in a digital world with ever-increasing data sets.

Dr. Morin's involvement with computers in radiology began while writing his master's thesis and continued while preparing his doctoral dissertation. His work has involved workflow management, CT reconstruction and processing algorithms, workflow analysis, dual energy quantitative CT (QCT), and MR reconstruction techniques to reduce motion artifacts. He also provided design, development, and technical leadership in implementing a picture archiving and communication system (PACS) institution wide at Mayo Clinic Jacksonville. Dr. Morin was one of the early implementers of electronic radiology practice at the Mayo Clinic at a time when few medical physicists were involved with PACS and digital medical imaging.

*by Kay H. Vydareny, MD*
*Associate Executive Director for Diagnostic Radiology*


*Kay Vydareny, MD*

The past year has seen the much-anticipated culmination of years of effort on behalf of ABR trustees, volunteers, and staff. The diagnostic radiology "Exam of the Future" has finally become the "Exam of Today," with the full Core Pilot Exam held in June 2013 and the first "real" Core Examination administration in fall 2013. The new Certifying Exam, which will replace the diagnostic radiology oral examination, is also on the near horizon. Maintenance of Certification (MOC) has continued to evolve as well, with continuous certification replacing the 10-year MOC cycle, public reporting of certification status on the ABR and ABMS websites, and a new broader definition of Self-Assessment CME (SA-CME) for Part 2 of MOC. A few details of these changes are provided in the sections below.

Another long-term project came to fruition this year. After more than six years of work by a number of individuals and organizations, the new interventional radiology/diagnostic radiology (IR/DR) certificate was approved in September 2012 by the ABMS Board of Directors, elevating interventional radiology to the status of a primary certificate. A cascade of activities has followed since that approval. The ABR interventional radiology trustees have begun to develop the first certifying examination that will be given for the new certificate, while the ACGME is nearing completion of a draft of the program requirements for interventional radiology residencies. More information on the new IR/DR certificate can be found in a separate article on page 21.

**Initial Certification**

Many of the diagnostic radiology activities this year have centered on the change in the initial certification examinations. A total of 120 volunteers have been working on 15 different committees to create items that would be appropriate for the upcoming Core Examination, which is being administered for the first time September 30-October 3, 2013, at the Chicago and Tucson exam centers. More than 1,200 candidates, mostly current fourth-year residents, are registered for the exam. In subsequent years, this examination will be given to residents at the end of their third year of radiology residency.

At the same time, another cohort of volunteers has been hard at work producing content to be delivered during the Certifying Examination; the first such exam will be delivered in October 2015 to the present fourth-year residents 15 months after finishing their residencies.

***June 2013 saw the last large ABR oral examination given in Louisville, Kentucky, with 2,042 candidates and 415 examiners.***

In the background, planning continued to ensure that the exam centers in both Chicago and Tucson are state-of-the-art facilities that can be relied upon to deliver the exams in an environment that is secure and as pleasant as possible for the candidates. The first ABR examinations (MOC exams) were administered in Chicago in April 2012. The Tucson Exam Center was used for the first time with the administration of the Core Pilot Exam in June 2013. Each time one of the new exam centers is used, the ABR learns more about improvements it can make to the facilities and examination processes.

June 2013 saw the last large ABR oral examination given in Louisville, Kentucky, with 2,042 candidates and 415 examiners in diagnostic radiology, medical physics, and radiation oncology. Although medical physics and radiation oncology will continue to offer oral examinations, this is truly the end of an era for diagnostic radiology. The ABR's oral examinations began in 1934 and were established in Louisville in 1980. Since 1934, more than 62,000 diplomates have

become ABR certified, with the majority of them having taken the oral exam in Louisville. Although three more oral examinations will actually be held in Louisville (October 2013, May 2014, and November 2014), the number of candidates at each of these exams will be much smaller.

Ninety-three percent of eligible candidates took the Core Pilot Examination at the exam centers in Chicago and Tucson. This was the first time that either center had been used to capacity, and the administration of the examination was nearly flawless, thanks to the efforts of many ABR staff, trustees, and volunteers. In Chicago, in order to accommodate the large number of candidates without "clogging" the lobby of the building in which the exam center resides, candidates take a five-minute bus ride from the nearby Renaissance Hotel; in Tucson this is not necessary. Candidates were asked for their feedback on the Core Pilot Exam experience, and some changes have been made for the upcoming examination. For example, lockers are being installed in both locations, and candidates will be able to bring their own snacks and beverages to tide them over during the long exam period.

The ABR has already begun thinking and planning for a new exam paradigm of the "distant future." We have always preferred to offer distributed exams at various locations around the country for the convenience of our candidates, and emerging technology may help us make this possible.

### Maintenance of Certification

In 2012-2013, the ABR began implementing new policies related to Continuous Certification, public reporting of MOC status, and self-assessment CME (SA-CME). These three interrelated policies are summarized below.

***Continuous Certification*** links the ongoing validity of certificates to meeting the requirements of MOC. Under the new process, ABR certificates no longer have "valid-through" dates. Instead, on each new and renewed certificate, the effective date is noted, accompanied by the statement that "ongoing validity of this certificate is contingent upon meeting the requirements of Maintenance of Certification."

In March of each year, the ABR will look back at the previous three calendar years to determine if each diplomate is meeting the requirements of MOC for CME, Self-Assessment, and PQI activities. Because this is a new process, the ABR is providing its diplomates with the time needed to complete these. Therefore, for current MOC participants, the look-backs in 2014 and 2015 will consist of review of licensure status and examination status only. The first "full" annual look-back will occur in March 2016 and will continue on an annual basis thereafter. New diplomates will have their first full annual look-back

### Diagnostic Radiology Physics Exam Results

| Year | Second-year residents | Third-year residents |
|---|---|---|
| 2008 | 90% | 88% |
| 2009 | 90% | 90% |
| 2010 | 94% | 88% |
| 2011 | N/A* | 99% |
| 2012 | N/A* | N/A* |

### Diagnostic Radiology Clinical Exam Results

| Year | Third-year residents | Fourth-year residents |
|---|---|---|
| 2008 | 96% | 98% |
| 2009 | 92% | 97% |
| 2010 | 94% | 91% |
| 2011 | 95% | 98% |
| 2012 | N/A* | 94% |

### Diagnostic Radiology Oral Exam Results

| Year | Residents taking exam for first time |
|---|---|
| 2008 | 88% |
| 2009 | 90% |
| 2010 | 92% |
| 2011 | 89% |
| 2012 | 89% |

**Second-year and third-year residents did not take exams in these categories because they are transitioning to the new Core and Certifying exams.*

in March of their fourth year of MOC participation. Professional standing (licensure) is still evaluated annually, and the MOC exam must be passed every 10 years. More information can be found at www.theabr.org/moc-dr-time.

***Public reporting of MOC status*** began for the ABR in March 2013, when the American Board of Medical Specialties (ABMS) began reporting on its public website (www.certificationmatters.org) whether or not each ABR diplomate is meeting MOC requirements for each certificate held. The three public reporting categories that may be attributed to each diplomate listed on the ABMS website are:

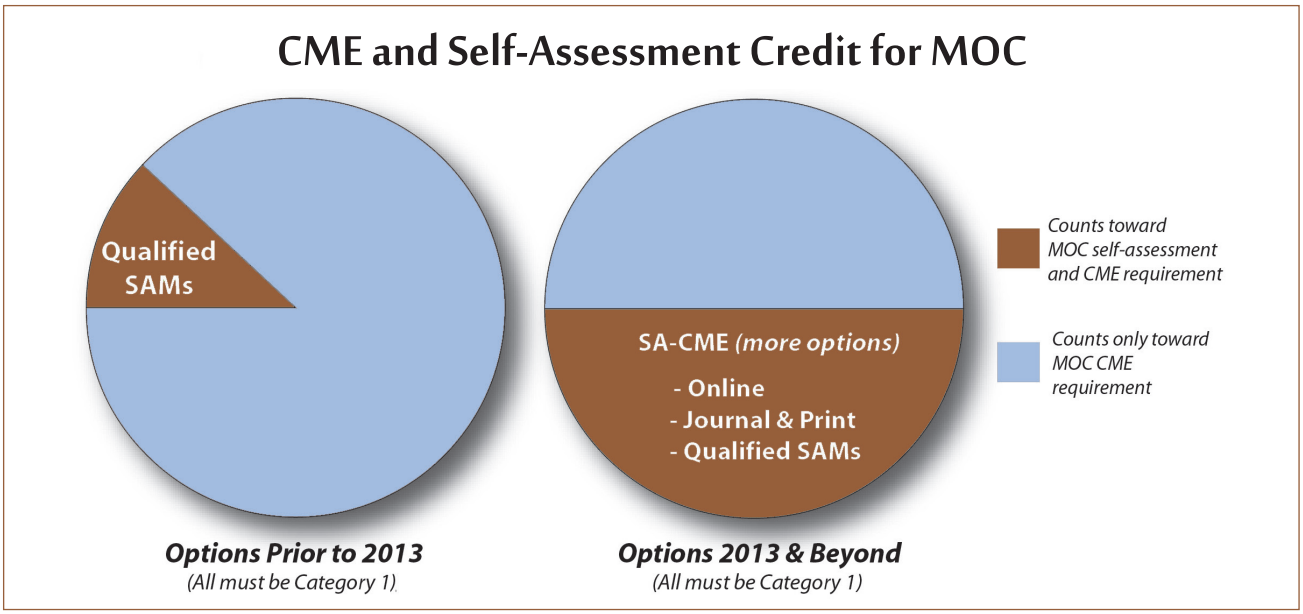
- *Meeting the requirements of Maintenance of Certification*
- *Not meeting the requirements of Maintenance of Certification*
- *Not required to participate in Maintenance of Certification (for lifetime-certified diplomates)*

The ABMS website also refers users to the ABR website (www.theabr.org), where further information regarding certification status can be found. The ABR's website has been enhanced to include its own online verification database of ABR diplomates.

***Self-assessment CME*** began January 1, 2013, when separate requirements for CME credits and self-assessment modules (SAMs) were merged into a single requirement: 75 CME credits every three years, at least 25 of which must be self-assessment CME (SA-CME) credits. At the same time, the definition of SA-CME was expanded to include more than just ABR-qualified SAMs. Now, the ABR also counts credits for completion of all AMA Category 1 CME activities in "enduring materials" (including web-based and print) and "journal-based CME" formats toward the MOC SA-CME requirement.

AMA Category 1 CME activities performed in person or remotely, as in the case of teleconferences or "live" Internet activities, do NOT automatically count as self-assessment CME. For these types of CME activities to count as self-assessment CME credit, the organizations that create them must submit them for review and approval through the ABR qualification process. If accepted, these activities will be qualified by the ABR as SAMs and will count as self-assessment CME. More information on SA-CME can be found at www.theabr.org/moc-dr-comp2.

If you have any questions about fulfilling the requirements of MOC under Continuous Certification, please call the ABR MOC helpline at (520) 519-2152 or email abrmocp@theabr.org.



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

In June 2013, after eight years of dedicated service, Bruce G. Haffty, MD, of New Brunswick, New Jersey, rotated off the Board of Trustees. Dr. Haffty served as president-elect from 2008 to 2010, and as president from 2010 to 2012. Dr. Haffty's seat was taken by Stephen M. Hahn, MD, of Philadelphia, Pennsylvania, an internationally recognized authority in lung cancer, mediastinum cancer, and sarcoma. Dr. Hahn had previously served as co-chair for the ABR's initial certification "written" exam committee on the same topics.

**Paul E. Wallner, DO,** Associate Executive Director for Radiation Oncology

**Dennis C. Shrieve, MD, PhD,** Trustee and Assistant Executive Director, Initial Certification, Radiation Oncology

**Anthony L. Zietman, MD,** Trustee and Assistant Executive Director, Maintenance of Certification, Radiation Oncology

In an attempt to assure diversity in examination development and attain the highest possible level of relevance, the radiation oncology trustees committed themselves to recruiting volunteers in private practice for all category committees. At this time, diplomates in private practice have been added to most of the eight site-specific committees, and additional volunteers continue to be recruited.

### Initial Certification

As expectations for a diplomate's knowledge base in a variety of nonclinical areas have increased, the radiation oncology trustees and category committees have begun to develop inventory pools of items for the written examinations related to patient safety, bioethics, quality assurance, and biostatistics. In addition, a pool of items related to "normal" issues is under development, to include identification of normal anatomy, determinations of tumor versus nontumor pathological findings in a variety of imaging modalities, and choices of "no treatment" as correct responses. Nonclinical skill items and "normals" will be added to both initial certification and Maintenance of Certification examinations, and will potentially consist of no more than 10 percent of scorable units. In anticipation of inclusion in examinations scheduled for 2014 delivery, new study guides have been developed and will be available on the ABR website.

After consideration of potential alternatives, the radiation oncology trustees determined that the oral certifying examination would be continued indefinitely, and that beginning in 2015, the venue would be changed to Dallas, Texas. The new testing site will be the test center developed by the American Board of Obstetrics and Gynecology specifically for oral examination purposes, and should provide an optimal setting for examination administration. Availability of the test center will necessitate advancing administration of the examination to March 2015.

The American Board of Radiology is one of eight ABMS member boards participating in the granting of subspecialty certificates in Hospice and Palliative Medicine (HPM). Before January 1, 2013, ABR diplomates were eligible to sit for the HPM subcertificate if they had HPM practice experience as specified by the conjoint boards. In October 2012, 51 radiation

**Radiation Oncology Initial Exam Results**
**(for first-time residents)**

| Year | Clinical | Physics | Biology |
|---|---|---|---|
| 2008 | 98% | 95% | 96% |
| 2009 | 98% | 89% | 96% |
| 2010 | 96% | 90% | 91% |
| 2011 | 94% | 96% | 97% |
| 2012 | 95% | 80% | 88% |

**Radiation Oncology Oral Exam Results**

| Year | Residents taking exam for first time |
|---|---|
| 2008 | 80% |
| 2009 | 89% |
| 2010 | 85% |
| 2011 | 82% |
| 2012 | 82% |

oncology and 12 diagnostic radiology diplomates sat for the examination, with a pass rate of 66 percent. Subsequent to January 1, 2013, eligibility to sit for the HPM certifying examination will require one year of an ACGME-approved fellowship. At this time, all approved fellowships are administered by the American Board of Family Medicine or the American Board of Internal Medicine (ABIM), and the biannual certifying examination is developed and administered by the ABIM.

**Maintenance of Certification**

Having initiated a dialogue with radiation oncology diplomates and working with the MOC Advisory Committee, the radiation oncology trustees have begun a development project that will significantly transform the nature of the MOC Part 3 cognitive examination. With a target date of spring 2015, a redesigned modular examination will be implemented. The total number of scorable units is anticipated to remain at 200; a nonclinical skills module may consist of 20 scorable units, and two required general radiation oncology modules may consist of 60 scorable units each. Those three modules could, therefore, have a total of 140 scorable units.

The remaining 60 scorable units could then consist of two additional modules of the diplomate's selection. If a diplomate's practice is limited to breast cancer, he or she might select two breast cancer modules. Alternatively, if the individual practices primarily breast and gynecologic cancer, he or she might select one module in each site. Those diplomates with primarily general radiation oncology practice might select two additional general modules. The nonclinical skills module would be similar to that developed for the initial certification qualifying (written) examination, with inclusion of items related to patient safety, bioethics and biostatistics, quality assurance, and "normals."

In January 2011, the American Board of Medical Specialties (ABMS) approved three Focused Practice Recognition (FPR) demonstration projects, two of which—brachytherapy and cardiac CT—were sponsored by the ABR. The criteria for projects selected included that they be a required element of primary specialty training and certification, have no available ACGME-accredited fellowship programs, and have evidence that volume and expertise impacted clinical outcomes. All projects had an initial pre-implementation phase of one year.

A significant element of the brachytherapy project was creation of a national brachytherapy registry (NBR), which is managed for the ABR by the University of California, Los Angeles, Department of Radiation Oncology. The ABR is grateful to Varian Medical Systems, Inc., for an unrestricted educational grant used to support development and maintenance of the registry. Formally launched for accrual in October 2012, more than 190 ABR radiation oncology diplomates have now initiated or completed the program entry process and are contributing clinical case data to the registry. Participants in the brachytherapy initiative must be actively participating in MOC.

***A significant element of the brachytherapy project was the creation of a national brachytherapy registry, through a grant from Varian Medical Systems, Inc.***

In an effort to increase participation in MOC by non-time-limited certificate holders, the ABR radiation oncology trustees now require MOC participation by all active volunteers. An initiative to increase participation among academic faculty members has been launched with presentations to the Society of Chairmen of Academic Radiation Oncology Programs (SCAROP) and the Association of Directors of Academic Radiation Oncology Programs (ADROP).

In 2012-2013, the ABR began implementing new policies related to Continuous Certification, public reporting of MOC status, and self-assessment CME (SA-CME). These three interrelated policies are summarized in the Diagnostic Radiology Report on pages 14-16. Further information may be found on the ABR website at www.theabr.org/moc-ro-landing.

If you have any questions about fulfilling the requirements of MOC under Continuous Certification, please call the ABR MOC helpline at (520) 519-2152 or email abrmocp@theabr.org.

*by G. Donald Frey, PhD, Associate Executive Director for Medical Physics*

On July 1, 2013, J. Anthony Seibert, PhD, replaced Richard L. Morin, PhD, as the trustee for diagnostic medical physics. Jerry Allison, PhD, continued his term as trustee for nuclear medial physics, and Geoffrey S. Ibbott continued as trustee for therapeutic medical physics and secretary-treasurer of the Board.

*G. Donald Frey, PhD*

### Initial Certification

Several years ago, the ABR developed policies regarding a requirement for Commission on Accreditation of Medical Physics Educational Programs (CAMPEP)-accredited training for medical physicists seeking board certification. These policies were announced far in advance so programs and candidates for initial certification would have time to prepare.

According to the first of these policies, 2012 was the last year candidates could apply for the Part 1 medical physics exam without having completed a CAMPEP-accredited medical physics residency. Because of the deadline, the ABR had higher than normal applications. In addition, during this transition time, a temporary exemption was provided for 2012, allowing applications from those in non-CAMPEP-accredited programs to apply, provided their program director attested that the program was seeking CAMPEP accreditation in 2012. Additionally, the ABR implemented a policy to accept candidates from programs that achieved CAMPEP accreditation for up to one year after the candidate graduated. The second policy requires that candidates applying in 2013 complete a CAMPEP-accredited residency before they can be approved for the Part 2 examination.

The May 2012 oral examination was the first time enough medical physics candidates had completed a CAMPEP residency to generate meaningful statistics. A total of 390 candidates took the exam. As can be seen in the chart at the top right, the performance of the CAMPEP residents was much better than the other candidates and was similar to candidates who had completed a diagnostic radiology or radiation oncology residency. We recognize that this is a select group. Nevertheless, these statistics are very positive and suggest the benefit of having completed a CAMPEP-approved residency.

The last major ABR oral examination in diagnostic radiology was held in June in Louisville, Kentucky. It

**2012 Oral Exam Results (CAMPEP)**

| | All Takers | First Time Takers | CAMPEP Residency |
|---|---|---|---|
| Total | 390 | 287 | 47 |
| Pass | 218 (56%) | 171 (60%) | 41(87%) |
| Condition | 59 (15%) | 42 (15%) | 4 (9%) |
| Fail | 113 (29%) | 74 (15%) | 2 (4%) |

**Medical Physics Part 1 Exam Results**

| Year | General | Clinical |
|---|---|---|
| 2008 | 78% | 86% |
| 2009 | 77% | 85% |
| 2010 | 77% | 85% |
| 2011 | 72% | 84% |
| 2012 | 82% | 83% |

**Medical Physics Part 2 Exam Results**

| Year | Diagnostic | Nuclear | Therapy |
|---|---|---|---|
| 2008 | 71% | 31% | 71% |
| 2009 | 70% | 58% | 70% |
| 2010 | 69% | 62% | 72% |
| 2011 | 74% | 33% | 72% |
| 2012 | 69% | 62% | 74% |

**Medical Physics Oral Exam Results**

| Year | Residents taking exam for first time |
|---|---|
| 2008 | 57% |
| 2009 | 55% |
| 2010 | 53% |
| 2011 | 56% |
| 2012 | 56% |

was one of the largest oral examinations ever, with 2,042 candidates and 415 examiners in diagnostic radiology, medical physics, and radiation oncology. Initial medical physics certification exams (Parts 1 and 2) were administered in August 2013, and the oral conditioned exams will be held in November 2013.

Although medical physics and radiation oncology will continue to offer oral examinations, the largest group—diagnostic radiology (DR) —is converting to a computer-based Core Examination and final Certifying Examination beginning in 2013 and 2015, respectively. The ABR plans to move the radiation oncology and medical physics oral exams to a testing center in Dallas that is operated by the American Board of Obstetrics and Gynecology and expects the first oral exams to be offered in Dallas in 2015. The use of a testing center rather than a hotel will introduce a number of logistical changes, but candidates should find the experience in Dallas to be very similar to the current process.

*The ABR plans to move the radiation oncology and medical physics oral exams to a testing center in Dallas.*

Medical physics is also a large part of initial certification for diagnostic radiology. A medical physicist serves on each of the Core Exam committees and each of the Certifying Exam committees. A committee of physicists also contributes to the radiation oncology medical physics exam.

**Maintenance of Certification**

The 2012-2013 changes in Maintenance of Certification (MOC), due to the transition from a 10-year cycle to Continuous Certification, were addressed by the MP trustees and ABR staff at the Radiological Society of North America's 2012 Annual Meeting, the American Association of Physicists in Medicine (AAPM) Spring Clinical meeting, the Missouri River Valley Chapter AAPM Meeting, and the AAPM 2013 Annual Meeting. To answer individual questions, the ABR also had a booth at the AAPM Annual Meeting.

These changes are described in the Diagnostic Radiology Report on pages 14-16 and in more detail on the ABR website at www.theabr.org/moc-rp-landing.

Continuous Certification requirements are the same across all three ABR disciplines, but medical physicists have more options for fulfilling the requirements of MOC Part 2, Lifelong Learning and Self Assessment. The annual look-back period for Part 2 is three years, and a diplomate must have completed 75 hours of continuing education in the previous three years. (An important exception only for the first full look-back in March 2016 is that credits obtained in 2012 will also be counted.) Of these 75 hours, 25 must be self-assessment CME (or CE for physicists). SA-CE is a new concept, and medical physicists have three options for earning credits, rather than two.

The first option, Self-Assessment Module (SAM) credit, is not new, and SAMs will continue to be counted as one of the forms of SA-CE. There are many sources of SAM credit, and the ABR maintains a list of available SAMs at www.theabr.org/moc-rp-sam.

The second option, which is new, is SA-CE credits for completion of all AMA Category 1 CE activities in "enduring materials" (including web-based and print) and "journal-based CE" formats. The key factor is that the materials include a post-test with a required score for successful completion.

The third option for SA-CME credits, unique to medical physics, is the self-directed educational project (SDEP). In an SDEP, the diplomate designs a learning project that meets his or her practical clinical needs. A physicist may claim up to 15 CE credits per year for successfully completing an SDEP. The SDEP does not need to be submitted to the ABR for approval, but like all self-attested material, it can be audited. Examples of SDEPs are available on the ABR website at www.theabr.org/moc-rp-sdep.

If you have any questions about fulfilling the requirements of MOC under Continuous Certification, please call the ABR MOC helpline at (520) 519-2152 or email abrmocp@theabr.org.

# NEW IR/DR CERTIFICATE Approved

In September 2012, the American Board of Medical Specialties (ABMS) approved the Interventional Radiology/Diagnostic Radiology (IR/DR) certificate to recognize IR as a unique medical specialty addressing the diagnosis and treatment of diseases through expertise in diagnostic imaging, image-guided minimally invasive procedures, and the evaluation and clinical management of patients with conditions amenable to these methods. The ABMS announcement came after significant work by dedicated individuals from the ABR and the Society of Interventional Radiology (SIR), which recently became the ABR's ninth sponsoring society.

SOCIETY OF INTERVENTIONAL RADIOLOGY
*Enhanced care through advanced technology®*

Those certified in IR/DR will have finished an Accreditation Council for Graduate Medical Education (ACGME)-accredited IR residency program and demonstrated competency to practice in diagnostic radiology, as well as the full scope of interventional radiology. The IR/DR certificate is intended to recognize the high level of competence needed for the contemporary practice of interventional radiology.

Candidates for the IR/DR certificate must successfully complete a distinct process for certification, separate from the DR certification process. The training requirements will include one clinical year, followed by five years of an ACGME-accredited IR residency. The IR residency will have three years of diagnostic radiology training, which should incorporate some months of IR training, and two years of specific IR training. Those two years should encompass training in critical care medicine and peri-procedural care, as well as participation in an inpatient admitting service—admitting patients and caring for them before, during, and after IR procedures.

Specific program requirements are still being written by the ACGME Diagnostic Radiology Residency Review Committee (RRC) and must go through a rigorous approval process before they are finally approved by the ACGME Board of Directors. After this approval, which may not occur until late 2014, programs may begin to apply for accreditation. The first programs likely will not be accredited until 2016.

The examination structure is still in the planning stages but probably will involve the DR Core Examination in the 36th month of training, a computer-based examination three months after completion of training, and an IR oral examination one year after completion of training.

To increase quality and safety for the public, the IR/DR certificate is designed to eventually replace the VIR subspecialty certificate. The transition from VIR fellowships to IR/DR residencies is expected to be a 7- to 10-year process. The exact date of this transition will depend on the ACGME program accreditation standards and other external conditions resulting from the new IR/DR certification process. When the ACGME ceases to accredit VIR fellowships and instead accredits only the new IR residencies, the VIR subspecialty certificate will sunset. Those who hold a VIR subspecialty certificate will be issued a replacement IR/DR certificate at no additional cost if they are meeting all MOC requirements. This process is slated to begin in 2016.

Each training institution will need to review the program requirements and determine whether and when to offer IR training though an IR residency program.

For those currently in training, the ABR recommends that they continue their training and seek certification according to the current processes already in place. Those interested in practicing in interventional radiology can seek certification in DR with a subspecialty in VIR, or pursue these two certificates via the Diagnostic and Interventional Radiology Enhanced Clinical Training (DIRECT) and certification pathway. Those who have begun DR training also may have an opportunity to transfer into an IR residency.

The ABR will continue to provide information regarding the new IR/DR specialty certificate as it becomes available.

To offer our readers more information about ABR activities, the annual report includes updates from the ABR divisions. Note that a report from the Financial Services Division can be found in the form of charts on page 24.

**Board Affairs**
*by Jennifer Hutson, MBA, Division Director*

The Board Affairs Division manages the administrative work related to the ABR's Board of Trustees, including assisting with bylaws revisions, managing informal and formal appeals hearings, supporting the Board's governance structure, and reviewing and negotiating contracts.

Over the past year, Board Affairs assisted with a significant bylaws modification: adding interventional radiology/diagnostic radiology (IR/DR) as a specialty and handling related changes. Board committees were reorganized to improve flexibility and efficiency. Board Affairs reviewed and negotiated more than 30 contracts and managed an informal hearing.

Internally, Board Affairs has been instrumental in the creation of a project management and requirements process. As this process continues to improve, the ABR will have clearer project requirements in place, thereby improving efficiency and decreasing project completion time.

**Certification Services**
*by David Laszakovits, MBA, Division Co-director, and Christopher Mazzarella, MBA, Division Co-director*

The Certification Services Division encompasses initial certification, Maintenance of Certification (MOC), exam production, exam distribution and security, and exam management and data quality. A team of 27 individuals works to support daily operations and future planning as radiology and medicine continue to evolve. Currently, our primary focus is on the accuracy of records and information, and on the creation of new tools to improve our customer service and provide the necessary key information to earn and maintain certification.

Initial Certification Services
In the 2012-2013 fiscal year, we began implementing the official recognition process for "board eligibility," the transition of diagnostic radiology (DR) from the written/oral model to the new Core/Certifying exam process, and preparations for the final DR written exam (ending in 2013) and oral exam (ending in 2014). The 2014 DR oral exam administrations will be the last held in Louisville, resulting in the end of an era and a transition to the new computer-based model for DR exams.

Maintenance of Certification (MOC) Services
The year 2013 marks the first full year of the ABR's move to Continuous Certification and public reporting of MOC participation. We have also continued to support the transition of our diplomates to the new website interface for tracking and recording MOC participation: myABR. In addition, MOC staff continues to reinforce our communication efforts by attending a number of annual society meetings to answer questions and foster better understanding of MOC and its participation guidelines.

Exam Production
Our exam production team, which includes exam development and multimedia processing staff, continues to work with our dedicated group of volunteers to produce 20 different exams annually, composed of 205 unique exam content modules. Team efforts include all initial certification, Maintenance of Certification, and subspecialty exams, which are delivered in both computer-based and oral formats.

Exam Distribution and Security
The past year has seen more revisions of exam and security procedures to allow for improved offerings of standardized, secure exams in our two new computerized testing centers, located in Tucson and Chicago. Our focus has been on maintaining a high level of integrity while increasing customer service and ease of process for examinations. Feedback from the pilot of the Core Exam resulted in changes to our operations and the addition of lockers to our centers.

Exam Management and Data Quality
This team continues to support our oral exam administrations as we retire the oral exam for diagnostic radiology. At the same time, we are preparing for a transition of the radiation oncology and medical

physics oral exams to a new venue in Dallas at the American Board of Obstetrics and Gynecology examination center. In addition, this team of ABR staff works tirelessly to monitor and validate all data used for ABR initial certification and MOC processes with an eye to data integrity and accuracy.

***The year 2013 marks the first full year of the ABR's move to Continuous Certification and public reporting of MOC participation.***

**Communications and Editorial Services**
*by Donna Breckenridge, MA, Division Director*

This division is responsible for producing and editing ABR external communications and for editing all examination items. During the past fiscal year, the division's two content editors reviewed, proofread, and suggested revisions for 20,508 exam items, made item-writing presentations at volunteer committee orientation meetings, and attended test assembly meetings. The editors continue to work with the exam production team to suggest improvements to the ABR's new software, ExamDeveloper™.

The implementation of many new ABR initiatives and changes drove the need for an increase in the frequency of ABR communications. The ABR's electronic newsletter, *The BEAM,* was redesigned, and the number of issues increased from two to three per year. *The BEAM* and the *Annual Report* were emailed to all candidates and diplomates, as well as program chairs, directors, and coordinators, and a small number of printed copies were also distributed. The *EOF Bulletin* evolved to a larger quarterly publication—the *Volunteer Bulletin*—and the mailing list increased to include all ABR committee volunteers. The internal staff newsletter, the *ABR Bulletin,* was re-instituted and now is distributed monthly.

Communications staff members take direct responsibility for editing and updating most public website content. An extensive review of the content was conducted by the ABR's associate executive directors and other staff in conjunction with the launch of the newly designed website in March. The director of communications and editorial services staffs the Board of Trustees IT Advisory Committee Website Subcommittee.

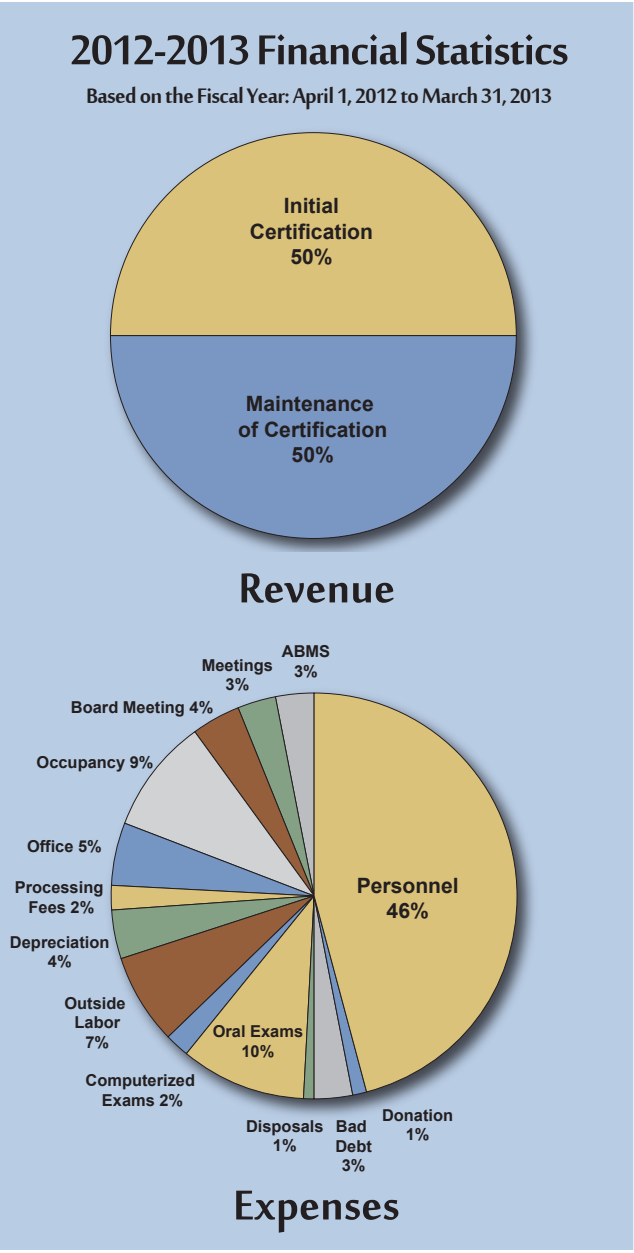
The division continues to produce press releases and respond to numerous informational requests from societies, journals, reporters, and the American Board of Medical Specialties (ABMS). Regular articles are also contributed to society newsletters. The communications director is an active member of the ABMS Communicators' Network and the Imaging Communication Network (ICN). Composed of representatives from American College of Radiology, the American Board of Radiology (ABR), the ABR Foundation, the Radiological Society of North America, and the American Roentgen Ray Society, the ICN fosters awareness regarding emerging topics of importance to radiology and shares and coordinates media responses.

**Digital Imaging**
*by Michael Evanoff, PhD, Division Director*

Quality assurance is essential to the ABR's certification process, and the exam production staff is trained in upholding the many standards the ABR employs in creating its exam material. The standards governing the creation of images used for exam material underwent a periodic review during the past year. Additional techniques were described for image processors to follow in accepting new material and maintaining the highest display quality possible.

Offering diagnostic-grade workstations to examinees would be ideal, but providing 770 seats (both in Tucson and Chicago) with medical-grade equipment would not be a wise expenditure of resources. All systems are calibrated according to the Digital Imaging Communication (DICOM) greyscale standard display function, as defined in part 14 of the DICOM standard. The calibration effort, which takes 12 days to complete, ensures consistent viewing across all systems the ABR uses to deliver examinations.

*(continued on next page)*




Another important return on investment to improving the quality of healthcare is seen in the contribution of the ABR Imaging Division to research projects. A number of scientific experiments are performed every year in collaboration with international researchers, resulting in publications in peer-reviewed journals and presentations at conferences.

Some of the topics investigated during the past year include reducing x-ray exposure while maintaining image quality, reducing misidentification of the patient, studying the effect of lossy JPEG2000 compression on detection of skull fractures, and using an iPad instead of commercial monitors for delivering exam content.

**Human Resources and Administration**
*by Karyn Howard, Division Director*

The ABR currently has 78 employees, representing an 8 percent growth in positions during the past two years. In addition to human resources and administrative functions, this division includes meeting planning, reception, project management, and volunteer services management. The Board of Trustees Volunteerism Committee creates systems and policies designed to facilitate the relationship between diplomates and other individuals willing to volunteer their time and energy for the ABR and the staff, to produce examinations and other elements of the Board's initial certification and MOC programs.

Volunteers serve as trustees, committee chairs, committee members, oral examiners, image asset coordinators, image asset contributors, self-assessment module (SAM) reviewers, members of the Initial Certification Advisory Committee, and members of the MOC Advisory Committee. Many are department chairs or program directors and are serving or have served in a leadership capacity for ABR's sponsoring radiological societies. During 2012-2013, 878 individuals volunteered their time and expertise to the ABR.

**Information Technology**
*by John Adams, Division Director*

The past year has been another exciting time in the Information Technology (IT) Division. The big news, of course, was the rollout of the new candidate and diplomate portal, myABR. Much more than just a different look, myABR is a new way for candidates and diplomates to interact with the ABR. Built on a brand-new architecture and rolled out in March 2013, myABR is a cleaner, more intuitive interface for all interactions with the ABR. In addition, it provides the needed architecture to support the ABMS public reporting initiative, as well as the ABR's new Continuous Certification model. The primary focus of myABR

is dedicated to making candidate and diplomate interactions with the ABR as simple and efficient as possible.

Public reporting and myABR are great examples of what teamwork can do. All ABR divisions came together to support the requirements, design, testing, and rollout. IT's development team built a platform that has become the basis for everything we do moving forward. We added two key players to this team, and to ensure everything works to specification, we created a quality control team as well.

The development team also provided new functionality to allow diplomates to register for the ABR's Focused Practice Recognition programs in Brachytherapy and Cardiac CT and new oral exam delivery software for our radiation oncology and medical physics candidates. The team has been designing and developing a billing system for our Financial Services Division, a document imaging system for HR and Certification Services, and a purchase order system for all divisions.

This past year also saw the addition of a Tucson Exam Center that will host West Coast candidates and diplomates for diagnostic radiology (DR) Core and Certifying exams, as well as DR MOC exams. The new Tucson Center, along with the Chicago Exam Center that opened last year, gives us the ability to accommodate more than 700 candidates at once for examinations. To support ABR headquarters and the Tucson Exam Center, the systems operations team has implemented high-availability infrastructure and an exam center management application. One of the biggest challenges of managing these exam centers is copying to and collecting data from each individual machine in the center. The command center software makes this task significantly more manageable.

These initiatives came on the heels of a remodeling of the Tucson headquarters to accommodate the new exam center and the ABR staff. The remodel also included a complete re-wiring of the building, a new wireless network, a new VOIP phone system, and the addition of an exam lab where new exam software can be tested prior to deployment in our centers.

**Psychometrics and Evaluation**
*by Anthony Gerdeman, PhD, Division Director*

During the 2012-2013 fiscal year, the Psychometrics and Evaluation Division continued to focus on the diagnostic radiology Core Exam, as well as the development of new scoring software and procedures related to the first Core Exam administration in October 2013.

A primary focus of the division has been evaluation of the 2013 Core Pilot Exam. One of the many objectives of this exam was to provide participants with performance feedback to help them identify areas of weakness before the Core Exam. Other important objectives have included evaluating various aspects of the scoring rules, content performance, exam software, exam environment, image quality, and timing. Several aspects of the reliability of the Core Pilot Exam were also assessed.

In addition, division staff revised and delivered the 2013 practice analysis surveys for diagnostic radiology, radiation oncology, and medical physics. This process involved engaging the ABR trustees in making appropriate revisions to each of the survey instruments. The revision process ensures that the surveys are up to date and reflect the current state of practice in each discipline. A paper titled "The ABR's Practice Analysis Survey: Comparison of 2010 and 2013" will be formally presented at the Radiological Society of North America 2013 Annual Meeting.

The Diagnostic Radiology Practice Analysis Survey was distributed to 16,369 radiologists, and 4,106 (27.17%) were returned, including incompletes. A total of 1,763 (11.67%) participants completed this survey. The Medical Physics Practice Analysis Survey was distributed to 7,913 physicists, and 3,325 (42.77%) were returned, including incompletes. A total of 2,358 (30.33%) participants completed this survey. Finally, the Radiation Oncology Practice Analysis survey was distributed to 3,634 radiation oncologists, and 926 (26.43%) were returned, including incompletes. A total of 670 (19.12%) participants completed this survey. The survey results will be used to revise the test content blueprints of the initial certification and MOC examinations.

# A SHORT HISTORY of the ABR Oral Exam

*The following information is from* The American Board of Radiology: 75 Years of Service, *by Otha W. Linton.*

From its beginning in 1934, the ABR oral examination was viewed as the key moment and pinnacle of preparation by candidates for certification. The Board accepted written exams as an adjunct in the 1960s, but most trustees professed a commitment to the oral exam, as did the dozens and then hundreds of radiologists who were recruited as guest examiners. The oral exam was the "rite of passage"—the day of professional success or failure for each candidate and a lifetime of memory.

Examiners were mandated to standardize their questions and style of questioning, and the format remained constant in the various cities where the exams were conducted. Most candidates were examined in a single day, but others were examined over two half-days. In the early years, the trustees met at the conclusion of each session to review candidate performance, but soon the numbers outgrew full board review, so each panel of examiners gathered to review their findings on each candidate. Results were tabulated onsite and letters sent to each examinee indicating pass, fail, or conditioned. Failure of several tests required a second exam and passing of all the tests.

By 1957, six exams were required for candidates seeking certification in general radiology: three in diagnostic radiology, two in therapeutic, and one in physics. At the end of 1965, nuclear medicine was made a separate exam for candidates for certification in diagnostic radiology. Nine half-hour oral exams in one day created a full schedule for candidates and examiners.

At the end of 1977, a series of recommendations were made by the ABR examination committee. These included a proposal for only one yearly oral exam in June; the recruitment and training of more examiners and the development of a protocol for evaluating them; the standardization of exam contents and the grading system; and an appeals mechanism for candidates.

In the spring of 1978, the ABR voted officially to require an internship (dubbed postgraduate year 1, or PGY-1) as compulsory for diagnostic radiology candidates, as it provided aspiring specialists with experience in the direct care of patients and reliance on consultative specialists. The decision was also made that trustees should supervise and manage the work of guest examiners, rather than taking a full load of exams themselves.

***Executive West Hotel in Louisville, Kentucky***

As the number of candidates applying for examination increased to about 1,000 per year, the logistics of holding the oral exams at numerous hotels around the country became more complex and expensive. The trustees proposed that the Board select a test site that could be used on a regular basis, thus beginning, in 1980, a three-decade relationship with the Executive West Hotel in Louisville, Kentucky (now known as the Crowne Plaza).

In 1983, the trustees approved several modified rules for oral exams: a candidate failing two categories would be required to repeat those two, but not those passed; a candidate failing one category might benefit from the examiners' panel raising the grade to pass; those failing two categories might benefit from the panel agreeing to raise one, but not both, of the grades; and, any candidate failing three categories was required to repeat the entire exam. For those tested for special competence in nuclear radiology, the three categories were counted as one in that failure in one meant that all three had to be repeated. The nuclear category was counted as one of the nine in the diagnostic profile.

For several years, the ABR had allowed only those candidates who passed the written examination to take

the orals. Candidates who failed the oral exam were given three opportunities to retake it before being required to start over. Beginning in 1985, the oral exam for diagnostic radiology was increased to 10 topics, and virtual cardiac was added as a category in 2004.

Several years ago, ABR diagnostic radiology trustees began to consider making substantive changes to the structure of the exams for the primary certificate in diagnostic radiology, based on several trends. With the final certifying exam in diagnostic radiology given at the end of training and covering the entire field, residents devoted much, if not all, of their last year of training to prepare for this exam. They attempted to become knowledgeable in the entire field, even though most residents had already selected an area of subspecialty. They often memorized long lists of differential diagnoses, a process that did not create durable learning. Furthermore, they wasted the opportunity to gain practical experience applying knowledge learned in the first three years under the supervision of expert faculty.

***New ABR Exam Center in Chicago, Illinois***

Recognition of these trends, along with other considerations, drove the ABR trustees in diagnostic radiology to create an entirely new initial exam structure. The first change made was to move the comprehensive exam covering the entire field back into residency at the end of the third year (PGY-3), after 36 months of radiology residency. This Core Exam covers the entire field of diagnostic radiology. It is computer based, image rich, and practical, and it includes medical physics. The exam tests knowledge and comprehension of anatomy, pathophysiology, all aspects of diagnostic radiology, and physics concepts important for diagnostic radiology. It is offered twice yearly.

**Diagnostic Radiology**
**Planned Core and Certifying Examination Schedule**

| Date | Core Exam | Certifying Exam |
|---|---|---|
| October 2013 | X | |
| June 2014 | X | |
| October 2014 | X | |
| June 2015 | X | |
| October 2015 | X | X |
| February 2016 | | X |
| June 2016 | X | |
| October 2016 | X | X |

Examinations are administered at the ABR Chicago and Tucson Exam Centers.

The final Certifying Exam, which replaces the current oral exam, will be offered 15 months after completion of residency training and will be given beginning in October 2015. The Core Exam must be passed before a candidate is eligible to take the Certifying Exam. It will have several features in common with the Core Exam; it also will be computer based, image rich, and practical, and it will include medical physics. However, rather than cover the entire field, it will allow the candidate to select either a general diagnostic radiology clinical practice exam or one more focused on his or her intended practice domain.

Regardless of this selection, all candidates must pass modules on the essentials of radiology and on noninterpretive skills. These modules, containing material all radiologists would be expected to know and apply even if their practice were primarily focused on one subspecialty, will assess knowledge, comprehension, application, analysis, and management. Consisting of five modules, the Certifying Exam also will be offered twice yearly.

For more information on the new exams, please visit www.theabr.org/core-and-cert-exam-overview.

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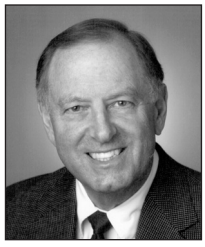

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