



From the Editor

The Importance of ABR Self-Regulation: We Hear You. We Are You.

2018;11[2]:17-18

by Lane F. Donnelly, MD, Editor, *The Beam*

In its 2017 *Annual Report* [1], the ABR introduced the tagline “**We hear you. We are you.**” This emphasizes that a majority of the people who design and execute the policies and procedures guiding ABR initial certification and Maintenance of Certification are practicing in the fields of diagnostic radiology, interventional radiology, medical physics, and radiation oncology. An article in this issue of *The BEAM* [2] mentions the extraordinary amount of time offered by those who serve as ABR volunteers: more than 72,000 volunteer hours per year, which equals 9,009 workdays or 34 full-time equivalent (FTE) staff members and amounts to more than \$10 million in labor costs.

The volunteerism of so many individuals in the governance and operations of our certification processes emphasizes the importance of self-regulation. ABR volunteers and, we believe, most of our diplomates think their peers are best qualified to regulate the practice of their specialties. Physicians in general are one of the last few professional groups who have maintained the right of self-regulation; this is possible through board certification, which reassures the public that their physicians and medical physicists are competent [3]. Most people don’t like to be regulated; this group especially tends to resist. However, I imagine if our certification processes were overseen by the government or others without expertise in our specialties? Certainly, they would be less meaningful and potentially intrusive.

The fact that ABR volunteer hours account for more than \$10 million of labor also emphasizes that the ABR depends on and is indebted to its volunteers. Without them, the cost of radiology examinations and processes would be prohibitively expensive. It is important to the ABR that expenses be treated with the utmost stewardship and that the management of these expenses be transparent. To that end, in this and future issues of *The BEAM*, we are launching a series of articles titled *Focus on ABR Finances* [4]. In this column, Dr. Brent J. Wagner, a private-practice radiologist from West Reading, Pennsylvania, and president-elect of the ABR Board of Governors, will address different aspects of ABR finances.

This issue of *The BEAM* covers other topics as well, such as the life cycle of an ABR question, a discussion of walk-around knowledge as it pertains to the new Online Longitudinal Assessment (OLA) program, the restructuring of the American Board of Medical Subspecialties (ABMS) and what this means for the ABR, and an update on the OLA pilot. We hope you find this issue informative.

References

1. American Board of Radiology 2017 Annual Report.
www.theabr.org/news?category=Annual%20Report.
2. Allison JD, Gudenkauf A. The Life Cycle of ABR Exam Items and Contributions of ABR Volunteers. *The Beam* 2018;11[2]:25-28.
3. Donnelly LF, Mathews VP, Laszakovits DJ, Jackson VP, Guiberteau MJ. Recent changes to ABR maintenance of certification part 4 (PQI): Acknowledgement of radiologists' activities to improve quality and safety. *JACR* 2016;13-184-187.
4. Wagner BJ. Focus on ABR Finances. *The Beam* 2018;11[2]:21-22.



From the Executive Director

ABMS Governance Changes and the Vision Initiative: Why Should You Care?

2018;11[2]:19-20

by Valerie P. Jackson, MD

After reading this article's headline, you may be thinking, "This certainly sounds like a dull topic. Why should I spend my time reading this?"

The answer is simple: the ABMS affects you and your certification. In partnership with its 24 member boards—including the ABR—ABMS sets guidelines and standards for medical specialty certification. All member boards depend on ABMS guidance, especially when it comes to Maintenance of Certification requirements.

As a member of the ABMS Board of Directors, I know firsthand that ABMS does not operate in a vacuum from an ivory tower. We want and need feedback from all our constituents; in fact, we recently approved a new governance model with the following goals in mind:

- Restructure the ABMS Board of Directors to have closer representation and communication with the member boards
- Seek better input from a variety of sources, including practicing physicians, the public, and credentialers
- Give more power to the member boards and other stakeholders
- Provide structure for responsibility and cohesiveness among the member boards

To help achieve these goals, ABMS established a "Commission on Continuing Certification Vision for the Future Initiative." A planning committee selected 27 Commission members, including patients and public representatives, based on their interests, background, experience, and diversity.

In March, the Commission held its first in-person meeting in Washington, D.C. Members heard testimony from a wide range of stakeholders, who provided their perspectives on continuing certification, the challenges they currently face, and their thoughts about the future.

The next Commission meeting, which will continue to feature public sessions as well as live video streaming, will be held May 30 to June 1. Please see visioninitiative.org for more updates and opportunities for offering your [feedback and input](#).

We need ***your*** help to establish our “Vision for the Future”!



Focus on Finances

ABR Fees and Finances: Debunking the Myths

2018;11[2]:21-22

by Brent Wagner, MD, ABR president-elect

Over the years, I've seen and heard some confusing stories and incorrect assumptions about ABR fees and finances, especially on social media sites.

As a nonprofit organization, ABR finances are not a secret cloaked in an aura of mystery behind a thick velvet curtain, like the Wizard of Oz. The ABR has a nonprofit 501(c)(6) status and, as such, is subject to strict regulatory requirements with respect to financial transparency and fiduciary responsibility.

Like most boards, the ABR Board of Governors has three main legal duties:¹

- **Duty of Care:** Take care of the nonprofit by ensuring prudent use of all assets, including facility, people, and goodwill.
- **Duty of Loyalty:** Ensure that the nonprofit's activities and transactions are, first and foremost, advancing its mission by recognizing and disclosing conflicts of interest and making decisions that are in the best interest of the nonprofit corporation, not in the best interest of the individual board member (or any other individual or for-profit entity).
- **Duty of Obedience:** Ensure that the nonprofit obeys applicable laws and regulations, follows its own bylaws, and adheres to its stated corporate purposes and mission.

ABR fees are established to cover costs that are necessary to fulfill its mission of issuing a credible certificate that recognizes high professional standing and, consequently, helps protect the public. Much of the cost is maintaining the staff to coordinate and deliver a broad range of exam content. For example, it costs between \$150 and \$350 to develop each question item for an exam (see "Life Cycle of an ABR Exam Item" in this issue of *The BEAM*).

Unpaid volunteers, including ABR Board members, perform much of the work. The ABR has approximately 1,200 volunteer positions, and in 2017, the total number of ABR volunteer hours was more than 72,000. Most volunteer work for exam creation is done remotely via virtual conferencing; some exam assembly is performed at ABR Exam Centers in Tucson or Chicago.

The ABR recently achieved GuideStar Platinum Status—the highest level offered. GuideStar USA, Inc., specializes in reporting on U.S. nonprofit organizations. In 2016, it provided information on 2.5 million groups. Platinum status demonstrates that the ABR is focused on measuring its progress and results and is committed to organizational and financial <https://www.guidestar.org/profile/41-0773787>

The ABR, like most nonprofits, maintains financial reserves, which are necessary to allow for unexpected operating expenses as well as capital investments in infrastructure. This allows the board to be efficient and cost-effective. Financial reserves are also used to offset other expenses and keep fees as low as possible.

Finally, the ABR engages outside auditors and adheres to strict rules regarding accounting standards for nonprofit organizations.

The ABR is ever-evolving to be relevant and reasonable for our candidates and diplomates. Members of the ABR Board of Governors are committed to maintaining your fees at the lowest possible level while ensuring the value of your certification.

Reference

1. National Council of Nonprofits. Board Roles and Responsibilities. <https://www.councilofnonprofits.org/tools-resources/board-roles-and-responsibilities>. Accessed May 15, 2018.



Focus on Residents

The 2017 Core Exam: Solving the Problem of a Missing Module

2018;11[1]:23-24

by ABR Trustee Donald J. Flemming, MD

During the first day of the 2017 Core Exam at the ABR's Chicago Exam Center, the unexpected occurred: More than 450 examinees did not receive breast imaging questions. The ABR Board of Governors and staff immediately began brainstorming about how to address a very challenging situation.

First Step: How to Solve the Problem

After extensive discussion with stakeholders, including program directors and the breast imaging community, it was abundantly clear that the affected candidates' knowledge of breast imaging had to be tested to maintain the validity of the exam. The question of "how" to make this a reality, however, was much more challenging than the question of "why."

The ideal answer needed to be practical and cost effective. The least burdensome solution was to distribute a breast module exam to this group of candidates rather than have them return to Chicago. Unfortunately, that solution was much more difficult to execute than one might believe.

Considering the Challenges of a Distributed Exam

One of the biggest technological challenges of the Core Exam is the image-intensive nature of the questions. The image files are intrinsically large to optimize projection, and the exam has many of them. Bandwidth to quickly deliver content to all examinees on demand—even just one module—is a technical hurdle for the existing platform owned by the ABR.

We also had many questions about equipment the candidates would use:

- Is their computer modern and loaded with an appropriate browser that has been updated on a regular basis?
- Could the exam be blocked by an existing firewall?
- Is their internet service fast and reliable?
- Is their monitor quality sufficient to allow for image interpretation in this high-stakes setting?

After exploring all the options, we determined that the benefits of a distributed exam outweighed the challenges.

Creating a Distributed Exam That Worked

To make a distributed exam a reality, ABR staff and trustees took numerous steps:

- Content was carefully curated to keep image size to the minimum necessary.
- Technology was tested and re-tested to stress the platform and establish its limits.
- Candidates were scheduled to take the exam over two days to accommodate both technical limits and personal schedules.
- Communications about exam security and computer requirements were released to those involved.
- A “help desk” was created to respond to any technical issues candidates might encounter while taking the exam.

Thanks to the innovation and hard work of the ABR staff and trustees, 456 candidates successfully took the distributed breast exam in September 2017. We also realized there was a “silver lining” to this problem, as the Board had an opportunity to explore the possibility of a distributed Core Exam. We learned that the ABR does not currently have the technological resources to make this an immediate reality; however, we are committed to exploring technological and software solutions that might make a distributed Core Exam possible in the future.



The Life Cycle of ABR Exam Items and Contributions of ABR Volunteers

2018;11[2]:25-28

by ABR Trustee Jerry D. Allison, PhD, and Aaron Gudenkauf, Director of Exam Services

The ABR administers 33 different exam events per year. These exams are taken by candidates seeking to establish their expertise in one of the fields of radiology by gaining board certification, and by ABR diplomates seeking to demonstrate continuing mastery in a field of radiology. Comprising approximately 8,062 items (questions), ABR exams are written by volunteer committees of diplomates who are content experts. Currently, 1,178 ABR volunteers are involved in developing, assembling, and critiquing the content of exams. They contribute more than 72,000 work hours per year, amounting to 34 FTE professionals working together for our mutual benefit. Volunteer contributions to ABR exam preparation are estimated at \$10 million annually.

ABR exam development is a very detailed endeavor overseen by professional psychometricians. In general, 60 percent of each exam is composed of new items. The remaining 40 percent of exam items have been previously used. These used items facilitate statistical evaluation of exam difficulty, which is used to equate the difficulty of exams over time. All exam items have an associated record that identifies their knowledge domain, the number of times used, statistical evaluations of each usage, editorial evolutions, and other references.

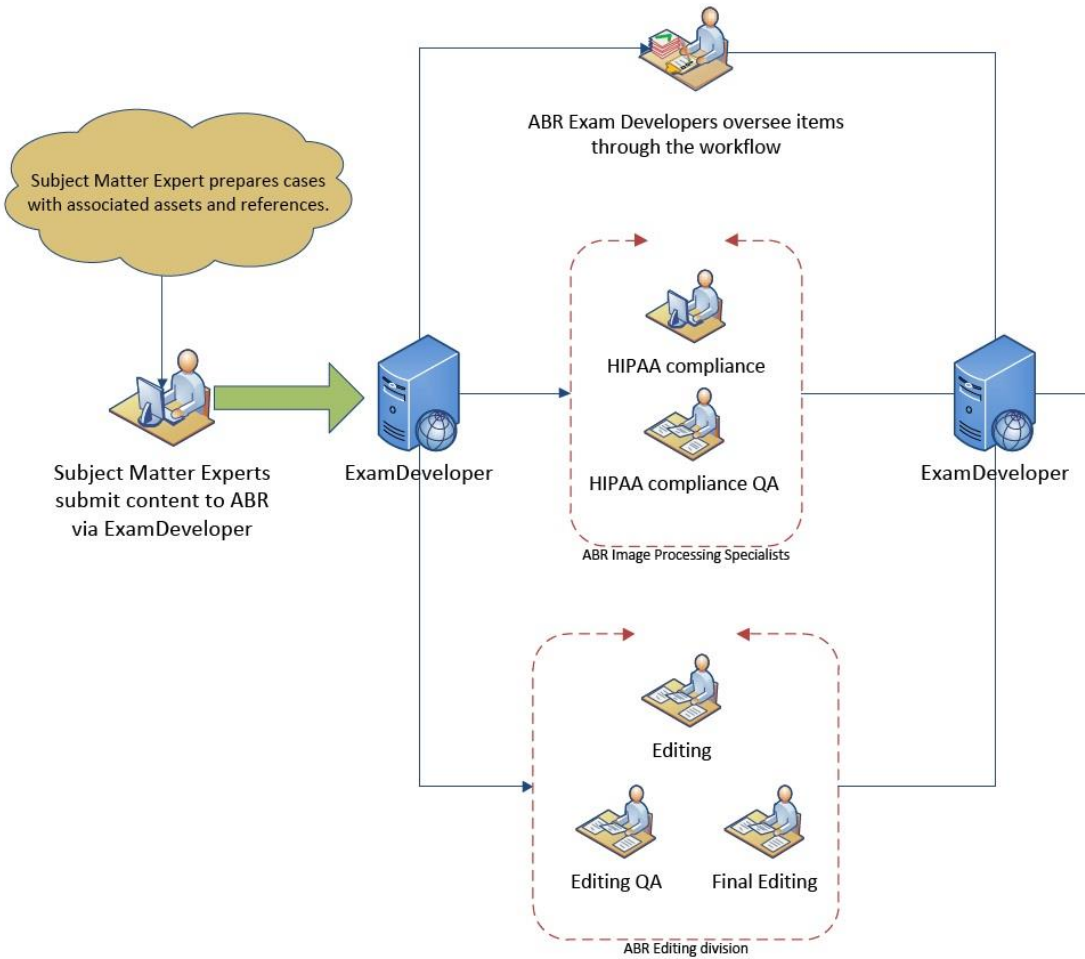
Occasionally, candidates or diplomates contact the ABR with concerns about a specific test item. Inquiries are handled by associate executive directors (AEDs), trustees, and the content experts of associated volunteer committees to resolve any issues. If an item is found to be deficient, appropriate corrections are made to exam results.

The ABR also conducts oral exams as a final step for candidates seeking certification in radiation oncology, medical physics, or diagnostic and interventional radiology. Oral exam items have a life cycle very similar to that of the written exams described above. Specific quality control processes are also in place: Each examiner is observed by AEDs, trustees, and senior examiners to ensure that the conduct of the exam is consistent and fair. The performance of each examiner and each examiner panel is evaluated. Although oral exam panels have remarkably similar performances, any irregularities detected are addressed appropriately.

Clearly, the most precious commodity in the rather involved creation of ABR exam content is the participation of volunteer subject matter experts. THANK YOU TO OUR DIPLOMATE VOLUNTEERS!

The illustrations below demonstrate the major phases in the life cycle of an ABR exam item and the development of an exam.

Writing of New Exam Items



Committee Review of New Exam Items and Exam Assembly

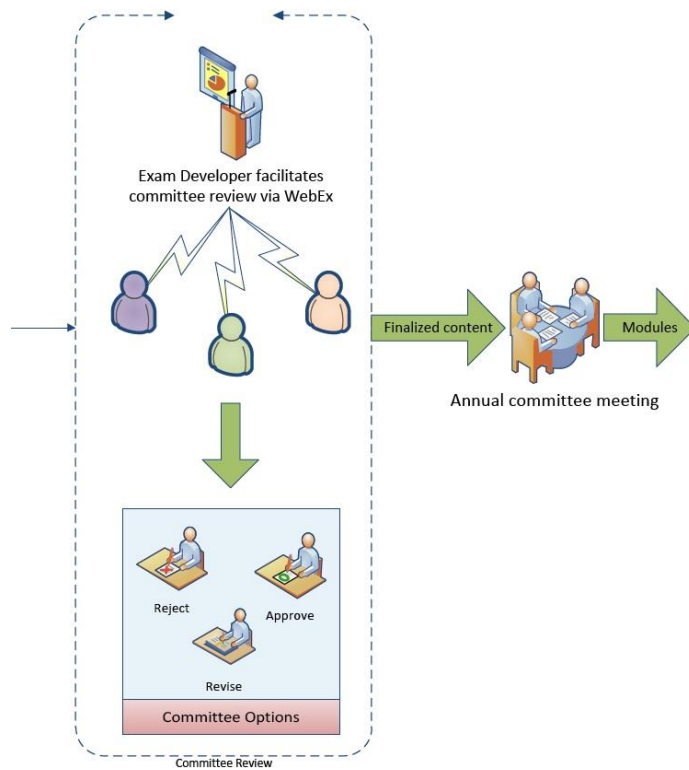
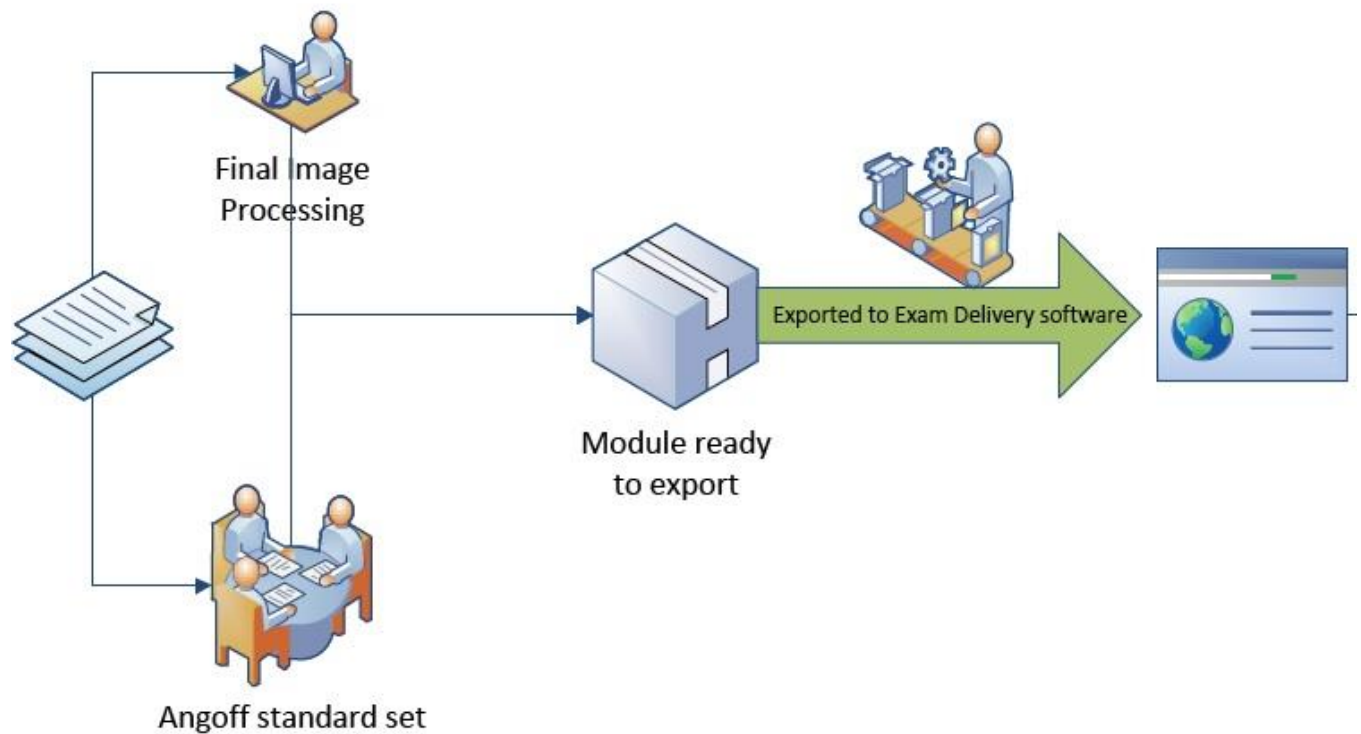
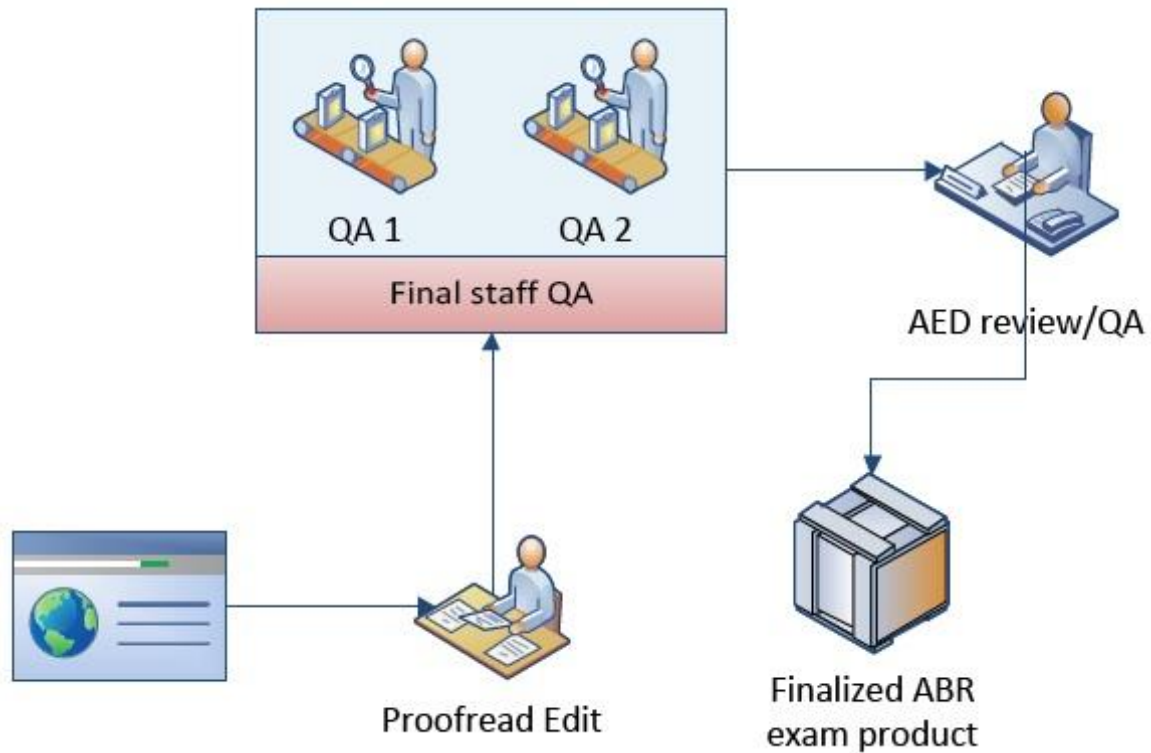


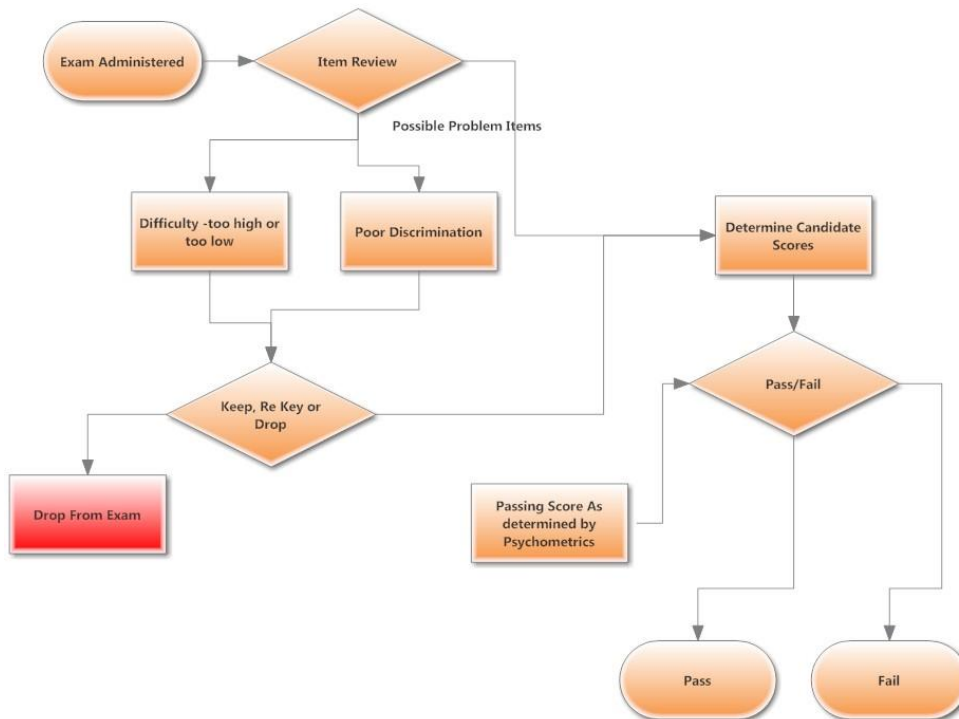
Image Processing and Rating of Item Difficulty (Angoff)



Exam Review Before Administration



Item Review After Administration





Focus on Diagnostic Radiology

Walking-Around Knowledge, Defined

2018;11[2]:29

by ABR Trustee Mary S. Newell, MD

We've heard of "walking-around money:" cash carried on a person for routine expenses and minor emergencies. "Walking-around knowledge" is a less familiar concept, but when defining it, some parallels can be drawn to its fiscal cousin. It is the knowledge we comfortably carry with us every day to draw on and dispense as we do our jobs, without the need to consult textbooks or journals. It allows us to recognize classic findings on images; construct a differential diagnosis; answer the questions our technologists, residents, and referring physicians ask us each day; and convey the potential risks and complications of a procedure to our patients, all seamlessly and accurately.

It is this type of knowledge that we seek to evaluate with the ABR's upcoming Online Longitudinal Assessment (ABR-OLA) tool: the very salient and relevant information that is essential to practicing effectively on a daily basis. I am a breast imager; some common scenarios where I might spend some of my walking-around knowledge include deciding whether a group of breast calcifications is suspicious; determining which features of a mass suggest the need for biopsy with ultrasound; counseling a patient on when she should start having screening mammograms; and outlining to a referrer how we best work up a lump in a 25-year-old woman. Breast imagers deal with these situations daily, and we almost certainly carry the answers in our "pockets" like loose change. Of course, my walking-around knowledge is different from that of a neuroradiologist or someone doing MSK imaging.

As you receive your weekly practice-specific questions once ABR-OLA deploys, most may seem easy to you. That is good! It means your wallet is stuffed with "walking-around knowledge." Some questions may seem harder, and you might answer incorrectly. That is OK too. No one knows everything. You'll have the opportunity to read the rationale behind the correct answer and review references. Our hope is that you'll say, "I didn't know that but I probably should have, and I will from now on."

So, as we anticipate the launch of our new Online Longitudinal Assessment tool, start actively recognizing all the knowledge, insight, and skills you manifest each day without breaking a sweat or thinking twice. That corpus of "walking-around knowledge," which serves your patients so well, will also be the currency of success for ABR-OLA. You can bank on it!



Update on Interventional Radiology

Popularity of New Certificate Affirms Specialty

2018;11[2]:30-31

by ABR Trustee John A. Kaufman, MD

The new Interventional Radiology/Diagnostic Radiology (IR/DR) certification has replaced the previous combination of a Diagnostic Radiology (DR) specialty certification and a Vascular and Interventional Radiology (VIR) subspecialty certification. In October 2017, more than 97 percent of eligible diplomates converted their DR and VIR certificates to IR/DR certificates. Most who did not convert had experienced changes in their practice patterns.

Because IR/DR is such a new specialty, some credentialers may not yet understand this change. If the need arises, has created [a letter to credentialers](#) to explain the transition.

Growth in ACGME-accredited Residencies (as of March 2018)

- ***IR Integrated Residencies (admission from medical school):*** A total of 81 are approved or about to be approved, translating into 103 R1 (PGY2) positions for 2020.
- ***IR Independent Residencies (admission from a DR residency):*** Comes online July 2020, but almost 60 residencies are already approved or pending approval.
- ***Early Specialization in Interventional Radiology (ESIR) DR programs:*** DR residents may focus on IR during DR training and gain one year's credit toward the two-year IR Independent Residency. Almost 130 programs approved or pending approval.

2018 IR Residency Match

A total of 590 students applied for 135 positions this year. Every position was filled, and program directors agreed that the applicant pool was again very strong. Awareness of IR/DR certification among medical students seems to be very high, a distinct shift from the VIR subspecialty certification. Medical students who did not match will still have several opportunities to train in IR, including transferring to IR/DR within their institution or matching to an Independent IR Residency following a DR residency.

Offering Certification to a New Constituency

Diplomates certified in diagnostic radiology or general radiology who completed an ACGME-accredited VIR fellowship more than 10 years ago are eligible to take the oral component of the IR/DR Certifying Exam to earn IR/DR certification. Applications for this pathway will be accepted

until April 30, 2020. For more details on this limited-time opportunity, please visit the [IR/DR Transition Pathway](#) section of our website. Candidates who do not apply by this date will need to pursue certification through the standard process. The ABR strongly urges anyone eligible for this pathway to apply as soon as possible.

For More Information

Please visit the [IR/DR section of our website](#), call (520) 790-2900, or email information@theabr.org.



Focus on Radiation Oncology

Committee and Trustee Transitions for Radiation Oncology in 2018

2018;11[2]:32-33

by Paul E. Wallner, DO, Lynn D. Wilson, MD, MPH, and Kaled M. Alektiar, MD

Beginning in 2012, eight radiation oncology (RO) category groups were formalized, each with two co-chairs: one for computer-based (qualifying) initial certification (IC) and Maintenance of Certification (MOC) exams, and the other for oral exam case development and implementation. Category members have contributed written items (questions) for IC and MOC exams, submitted oral exam cases, and served as oral examiners.

An important change will impact all ABR clinical category volunteers in 2018. Category groups have been significantly expanded with the appointment of new volunteers, and each volunteer will be assigned to a specific task: submission of IC written items, submission of Online Longitudinal Assessment (OLA) items, or submission of oral exam case material. All category members who are at least five years post-IC will be eligible to serve as oral examiners.

In October 2018, Lynn D. Wilson, MD, MPH, will rotate off the Board of Trustees (BOT) after seven years of service. Dr. Wilson is currently chair of the RO trustees and vice chair of the BOT for RO. At the Board of Governors (BOG) meeting in February, Andrea K. Ng, MD, MPH, was elected to replace Dr. Wilson when his term ends. Dr. Ng is currently professor of radiation oncology at Harvard Medical School and attending physician at the Dana-Farber Cancer Institute, Brigham and Women's Hospital, Boston, Mass. She trained in radiation oncology at the Harvard Joint Center for Radiation Oncology and is an internationally recognized authority on lymphomas and other hematologic malignancies.

Kathryn Held, PhD, has been appointed to serve as chair of the Cancer and Radiation Biology Committee, to replace Amato Giaccia, PhD, who has served in that capacity for more than 10 years. Dr. Held has been a member of the committee for many years. She is a distinguished and internationally renowned scientist, currently serving as associate professor of radiation oncology at Harvard Medical School and associate radiation biologist in the Department of Radiation Oncology at Massachusetts General Hospital (MGH). She leads the Held Laboratory, part of the Cellular and Molecular RO program at MGH. She earned her PhD at the University of Texas Austin in 1979 and has been a member of the National Council on Radiation Protection

and Measurements (NCRP) since 2006. She served on the NCRP Board of Directors from 2008 to 2014 and as vice president from 2011 to 2014. Dr. Held currently serves on the editorial boards of Radiation Research and the International Journal of Radiation Oncology Biology Physics, and she has served on numerous National Academy of Sciences committees. In addition to her own funded studies, she has international grants working with labs in Japan, where she currently spends one month per year.

The ABR extends a heartfelt thank-you to Drs. Wilson and Giaccia for their many years of volunteer service, and we welcome Drs. Ng and Held.



Focus on Medical Physics

The ABR Oral Exam

2018;11[2]:34-36

by ABR Trustees Jerry D. Allison, PhD; Kalpana M. Kanal, PhD; Matthew B. Podgorsak, PhD;
and ABR Governor J. Anthony Seibert, PhD

Introduction

After 40 years of administering the medical physics Oral Exam in Louisville, Kentucky, the ABR plans to move the exam to Tucson, Arizona, in 2019. (The 2018 Oral Exam will remain in Louisville.) This transition provides a good opportunity to review the nature and purpose of the Oral Exam.

Also called Part 3, the Oral Exam is the final one in a sequence of three exams that together form the basis for ABR certification in medical physics. Material on the Oral Exam is based on the knowledge and skills that a competent medical physicist should have upon completion of a medical physics residency. This material is essentially the same as that on the Part 2 Computer-based Exam, but with a stronger emphasis on clinical medical physics, clinical judgment, and communication. Successful completion of Parts 2 and 3 demonstrates the level of achievement necessary for a medical physicist to practice independently. The content guide for the Oral Exam is available on the ABR website at <https://www.theabr.org/medical-physics/initial-certification/part-3-exam/content-guide>.

The Structure of the Exam

The questions on the oral exam are in five categories, given by five examiners in five 30-minute sessions. Each examiner asks one question from each category, and the order is varied to ensure equal coverage of each category. This schedule is shown in the table below.

Examiners	Question Order				
Examiner 1	Q1	Q2	Q3	Q4	Q5
Examiner 2	Q2	Q3	Q4	Q5	Q1
Examiner 3	Q3	Q4	Q5	Q1	Q2

Examiner 4	Q4	Q5	Q1	Q2	Q3
Examiner 5	Q5	Q1	Q2	Q3	Q4

All ABR exam scoring is criterion referenced, meaning that a passing standard is established in advance of the exam. The exam is not graded on a curve, and there is no set percentage of failures.

Ensuring Fairness

One of the concerns candidates have about an oral exam is the possibility of subjective grading. Another concern is expressed as, “What if I don’t hit it off with an examiner?” We will address both concerns below.

The first step in producing a fair exam is to establish an equitable and relevant method for developing each question. A committee of volunteer medical physicists who have recognized expertise in one of the three medical physics specialties develops the questions. These committees also critically analyze the questions to ensure they are clear, unambiguous, and do not have a regional bias. Committee members develop answers to guide the examiners, suggest follow-up questions, and select the questions for each Part 3 Exam. A content grid for each of the three medical physics specialties ensures each exam is properly balanced. For diagnostic medical physics, the content grid also establishes the correct balance of MRI and ultrasound for each Part 3 Exam.

When the examiners gather before the exam, all who will ask each question meet to discuss the it, including any nuances of which they should be aware. After a question is given as part of an exam, we analyze how it performed by asking, “What is the average score for each question?” We also analyze the discrimination, a statistic that compares the performance of the top scorers with the performance of the bottom scorers for each question. Clearly, we expect the better overall performers to receive higher scores on each question.

Examiners also receive extensive training before the administration of the exam. Topics include:

- putting candidates at ease,
- supporting candidates who are struggling with a question,
- scoring questions,
- managing time during the exam administration, and
- many others.

New examiners are given extra training and must observe experienced examiners before they are allowed to examine.

To ensure fairness, we randomly assign candidates to the available time slots; thus, first-time takers and returning candidates are grouped together. The only information the examiners and panels have about a candidate is his or her name. We also take specific actions to ensure there is no significant personal or professional relationship between an examiner and a candidate.

Several times during the exam, the ABR trustees and governor conduct a formal observation of each examiner to be sure they are examining as we expect. Finally, to reduce examiner fatigue, no examiner sees more than three candidates in a row.

The examiners are grouped in panels of five. Following each exam session, the panel meets to review the session and discuss each candidate’s performance. Because each examiner asks one question from each category, the effect of any one examiner on performance results in any one category is minimized.

Statistics

The ABR keeps statistics for each question, as well as statistics for each examiner. We track the average score each examiner assigns to candidates and the percentage of high scores and low scores. We also keep statistics for each panel, which demonstrate that the histogram of panel performance is quite narrow. The variation in performance from panel to panel is very small.

As mentioned by Dr. Kanal in the last newsletter, there is no statistical difference between the exam results of female and male candidates. The scores from recent years are shown below:

First-Time Takers				
Exam Dates	Average Percentage Conditioning	Average Percentage Failing	Average Percentage Passing	Average Total Examinees
2014-2016	13%	20%	67%	230

A failure in one of the five categories on the Part 3 Oral Exam results in “conditioning” the exam, and the candidate must retake the failed category.

We are always happy to receive comments about the exam. If you wish to provide comments or have questions, we encourage you to contact us at any time at <https://www.theabr.org/contact>.



Spotlight on an ABR Diplomate

2018;11[2]:37-38

In this issue of *The BEAM*, we focus our spotlight on ABR diplomate **Robin A. Miller, MS, FAAPM**, a medical physicist at Northwest Medical Physics Center in Lynnwood, Washington.

Ms. Miller is a newly recruited volunteer who began her tenure approximately one year ago as a member of the Initial Certification Advisory Committee, in the role of rewriting and creating new Part 2 questions for the Therapeutic Medical Physics Exam.

She chose to volunteer so she could learn how to be a better question writer. "It is very easy to identify a poorly written question; it is not as easy to learn how to write a great question," she told us.

When we asked Ms. Miller what the best part of volunteering for the ABR is, she said, "Being new to the volunteering role, I am focusing on understanding the process and my opportunity to impact that process. I still recall, vividly, the stress of the exam. Having an opportunity to peek 'under the hood' at the process has given me a new perspective regarding the volunteer effort and review that go into creating the exam."

We next asked her in what ways her specialty has met or differed from her expectations. "The role of the medical physicist has evolved due to technological changes since I began in the clinic," she replied. "Imaging studies have become readily available, and tools to register different imaging modalities and tumor tracking during treatment have are now commonplace. Therapeutic and diagnostic physics are still considered separate disciplines but have a growing body of overlap."

To Ms. Miller, board certification means that she has met the criteria to be a qualified medical physicist and has demonstrated a level of competency. Although she is a lifetime certificate holder, she is still active in MOC because she has always taken part in continuing education. "The decision to participate in the MOC process was not an easy one, but I felt that it demonstrated a level of commitment to my practice of medical physics. Furthermore, it set an example to my colleagues who are not lifetime certificate holders."

Ms. Miller is most proud of the trust and confidence that radiation therapists have in her ability to troubleshoot issues at the treatment machine while the patient is on the table. "There are always those stressful moments when the LINAC doesn't quite behave as expected. I am also

privileged to be part of a collaborative team that provides the best care possible to our patients.”

In her spare time, Ms. Miller is a race car driver. She owes the pleasure of her new hobby of autocross to an extremely talented medical physicist and colleague, Rex Ayers, MS, DABR, MCCPM, CHP, who is a race car instructor, enthusiast, and nationally ranked driver. “I won my class for 2017,” she said, “and I’m taking the car to the track in a few weeks.”

List of Society Attendance

2018;11[2]:39

The ABR sponsors a booth at numerous society meetings throughout the year. Printed materials are available, and ABR representatives are in attendance to answer your questions. To see a list of society meetings at which the ABR plans to have a booth in 2018, please see below:

ABR-Attended Society Meetings

Society	Date(s)	Location
2018		
American College of Radiology (ACR)	May 20 - 24	Washington, DC
American Society of Neuroradiology (ASNR)	June 2 - 7	Vancouver, BC
American Association of Physicists in Medicine (AAPM)	July 29 - August 2	Nashville, TN
American Society of Therapeutic Radiology and Oncology (ASTRO)	October 21 - 24	San Antonio, TX
Radiological Society of North America (RSNA)	Nov 24 - 30	McCormick Place, Chicago, IL
2019		
Society of Interventional Radiology (SIR)	March 23 - 29	Austin, TX
Association of University Radiologists (AUR)	April 8 - 12	Baltimore, MD
American Roentgen Ray Society (ARRS)	May 5 - 10	Honolulu, HI
American Society of Neuroradiology (ASNR)	May 18 - 23	Boston, MA
American College of Radiology (ACR)	May 19 - 23	Washington, DC
American Association of Physicists in Medicine (AAPM)	June 22 - 26	Anaheim, CA
American Society of Therapeutic Radiology and Oncology (ASTRO)	Sept 15 - 18	TBD
Radiological Society of North America (RSNA)	Nov 30 - Dec 6	Chicago, IL