



The Truth about ABR Examinations

Throughout the year, considering all oral and computer-based examinations in all locations, the American Board of Radiology (ABR) administers at least 29 different exams to candidates for board certification in the fields of diagnostic radiology, radiation oncology, and radiologic physics. Each ABR examination consists of 50 percent new questions and 50 percent “reused” questions, drawn from a question bank of thousands of previously used questions. These questions are never the same as the ones used on the most recent exam, and they can be any combination of those thousands of previously vetted questions.

New ABR exam questions are written by numerous committees of approximately 600 expert volunteers who are practicing in the many specialties of radiology and donate their time to develop the questions and answers. Volunteers also submit images to accompany many of the questions. ABR staff members help organize and coordinate all the volunteer committee activities and submission of questions and images, edit the questions and answers for clarity and accuracy, and prepare the images to ensure HIPAA compliance and appropriate digital resolution.

The volunteer experts then choose which questions will be used on each exam, including new questions and those from the “item pool.” The reused questions have been analyzed by ABR staff psychometricians, who are experts in determining which ones statistically performed best and discriminated well on previous exams. Committee-member volunteers then hold test-assembly meetings to review each question chosen to ensure it is accurate, clear, clinically relevant, and at an appropriate level for the exam. As recommended by the volunteers, ABR staff members make changes to the final version of each exam and then assemble and deliver it.

As a result of the many detailed steps involved in this process, each new ABR examination is extremely resource-intensive to produce and requires countless hours of work by this coordinated effort of volunteers and staff members. Even with the donation of time by volunteers, it costs more than \$100,000 to produce a set of examination questions used in a given year (1). If the ABR were to produce entirely new content for examinations each year, the production expenses would double, and higher examination fees would need to be charged.

But cost is not the only factor; drawing from the pool of tested and refined questions also allows for:

- Required statistical reliability to validate each examination from year to year (2)
- More predictable and stable examination performance, as those items that perform below standards are removed.
- Monitoring of passing standards to ensure that they do not vary arbitrarily across time

Without reused questions, the difficulty level of each new exam could vary in unknown ways from year to year. Additionally, an unknown number of the completely new test questions may perform poorly on the new examination, necessitating their removal from scoring. This could result in an unbalanced, nonequivalent examination. For these reasons, best testing practices typically incorporate the re-use of

items on subsequent exams. However, pre-knowledge of those questions defeats the purpose of their use, as they will perform differently with pre-knowledge than if they were encountered by examinees as novel questions. The ABR, as do other certifying boards, copyrights the test materials, including the questions, based on federal intellectual property law. Each physician taking an ABR examination is given the ABR Examination Security Policy (3), which communicates the board's ownership of the questions. Each physician also signs a statement agreeing to abide by the ABR's policy.

The ABR's mission is to serve patients, the public, and the medical profession. That's why ABR exams are prepared to be the best possible test of the knowledge, skills, and understanding of the professionals it is certifying.

References

1. Shields B, Hoffman T. Studying or cheating? Misusing ABR exam questions will cost you. *ACR Bulletin*. July/August 2011:27-28.
2. College Board. Course and exam development. Available at: <http://professionals.collegeboard.com/testing/ap/about/development> . Accessed on October 14, 2011.
3. American Board of Radiology. ABR examination security policy. Available at: http://www.theabr.org/sites/all/themes/abr-media/pdf/ABR_Exam_Security_Policy_0.pdf Accessed on October 14, 2011.

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