

Have We Done Radiology Trainees a Disservice by Eliminating the Oral Board Examination?

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*Success is a journey, not a destination.
The doing is often more important than
the outcome.*

Arthur Ashe (1)

I vividly remember sitting in a hotel room in Louisville, Kentucky, taking the radiology oral board examination. I specifically remember my very first case on the first section of the examination, which was an interventional radiology case. The examiner showed me an aortogram, which to me looked completely normal. After carefully scrutinizing the image for several minutes, I still could not decipher an abnormality. Sweating profusely and overcome with anxiety, I started to communicate what I did see and started ruling out life-threatening entities that were not present on the image, such as aortic dissection. After a minute of silence (which to me felt like an eternity), the examiner asked me what I thought about a vessel coming off of the aorta and coursing toward the lung. "Oh!" I happily replied, after finally realizing the diagnosis. "This is a pulmonary sequestration."

I went on to pass the examination, but I think my experience with the very first case on the test exemplifies precisely why an oral examination is so important. The examiner was primarily concerned with my thought process and my ability to analyze an image, rule out life-threatening pathologic conditions, possibly decipher a meaningful differential diagnosis, and then come up with a final diagnosis. What a concept! Isn't this what we do as radiologists on a daily basis? The intellectual skills of critically and analytically evaluating a case are crucial in the practice of radiology, particularly when interacting with referring physicians for consultations on a daily basis.

Many educational leaders criticized the oral examination's lack of objectivity for evaluating trainees, because a student's score was based on the thoughts and perceptions of different examiners while they observed the examinee's performance and discussed cases. The new written American Board of Radiology (ABR) Core Exam does emphasize objectivity, as the majority of the test is composed of multiple-choice questions with a single best answer choice. Indeed, the ABR put significant thought and evaluation into changing the structure of the examination, as they do from time to time as part of their quality metrics to assure that the most objective and psychometrically valid examination is administered. Among the major drivers for the shift in format from the oral to the written core examination was increased transparency, as well as improved validity and reliability standards that occur with a written-based examination when administration is more standardized, scores are more objective, and relevance of examination questions to contemporary practice increases.

However, in the structure of the new core examination, a new set of challenges has been introduced that may not be ideal for radiology board certification. Trainees can theoretically pick the correct answer to a question without even knowing the actual diagnosis of a case shown as part of a question, through the process of either elimination or pure guesswork. Is this how radiology is practiced today? Do we get choices when evaluating a soft-tissue tumor *de novo*? Does this process simulate the way a radiologist reasons and approaches a case at the workstation?

On a purely subjective level, having trained radiology residents for more than 5 years since the start of the new core examination, I have noticed that residents are not developing the cognitive skills associated with reasoning through cases and formulating differential diagnoses. This is in large part the result of the way that we, as educators, help prepare residents for the core examination. Instead of allowing trainees to think intelligently through a case and come up with a meaningful differential diagnosis, many faculty have adopted multiple-choice questions in their board reviews that circumvent the thought process inherent in

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arriving at a differential diagnosis and final diagnosis. I will be the first to admit that I am guilty of this myself, as my board reviews are a series of multiple-choice questions in which residents are primed to answer each question in literally less than a minute. In doing this, we are effectively reducing the learning experience to a series of questions and answers, losing the process of reasoning and the journey that is inherent in discussing unknown cases.

At some point, I hope that those in charge of the board examination process will have a serious discussion about whether we are doing a disservice to our residents in administering the new written core examination. Interestingly, there has been much discussion and rhetoric in the current literature about radiology burnout, some of which results from the increased isolation of radiologists from referring physicians and colleagues. Isn't it ironic that this is precisely what is being promoted in the shift in our examination format—from one in which an interactive exchange occurs between the examiner and examinee (oral board examination) to a computer-interfacing examination (the written core examination) where the examinee lacks complete human interaction?

Regardless of whether the new written core examination continues for eternity, I do urge the radiology community to continue to emphasize case conferences in educational pedagogy by allowing trainees to discuss unknown cases. I also believe in using various tools in educational paradigms, including multiple-choice questions, because a diverse approach to educational methods is critical since trainees have different learning styles. Perhaps board examination test writers could incorporate more intellectually stimulating questions that specifically pertain to differential diagnoses to test the analytical skills inherent in the practice of radiology.

I suspect that many practicing radiologists, clinician educators, and trainees hold strong opinions on this topic. Am I out of line with my assessments? Should we go back to the oral board examination? Please let me know what you think by e-mailing me at omer.azwan@umm.edu.

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