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EDUCATION AND TRAINING

Modernization of Board Certification in Radiation Oncology: Opportunities Following COVID-19



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The outbreak of the SARS-Cov-2 pandemic and its accompanying disease, COVID-19, has demonstrated that in extraordinary circumstances healthcare systems are capable of adapting rapid and profound change. In a matter of weeks, virtual communication and remote interfacing were launched at clinics nationwide to ensure the continuation of patient care while minimizing the risk of viral transmission. Amidst these events, senior residents and junior staff physicians were preparing for the initial certification (IC) examinations administered by the American Board of Radiology (ABR) required for board certification in radiation oncology.

Challenged to identify solutions to minimize disruption to the board certification calendar, the American Board of Medical Specialties (ABMS) pledged that “its Member Boards are responding accordingly by allowing flexibility during this critical time for our nation’s diplomates,” and board organizations were encouraged to adopt programmatic adaptations to facilitate certification as scheduled.¹

Survey of Candidates for Radiation Oncology Board Certification

The Association of Residents in Radiation Oncology (ARRO) Executive Committee surveyed 568 members of the 2019-2021 graduating classes in April and May of 2020 regarding examination format and general scheduling preferences, with an overall response rate of 75% (n = 426) (Table 1). Among all respondents, 78% (n = 334) favored a web-based/virtual examination format as compared to an in-person examination. The majority (70%) favored test dates in September and October compared with later test dates. Of the surveyed residents from the graduating class of 2020, 77% (n = 126) reported specifying their employment contract to start based on the date for the clinical written examination as originally scheduled for July 24, 2020.

The ARRO Executive Committee submitted a letter conveying these strong consensus survey results to the

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Table 1 Survey Responses of Candidates for Radiation Oncology Initial Certification Examinations

Class	Initial Certification Examination	Response Rate	Format	Timing
2019	Oral Certifying Examination, Clinical Radiation Oncology	72% (135/185)	Web-based: 84% (n = 114) In-person: 16% (n = 21)	1st: October, 81% (n = 109) 2nd: May, 19% (n = 26)
2020	Written Qualifying Examination, Clinical Radiation Oncology	86% (164/190)	Web-based: 76% (n = 124) In-person: 24% (n = 40)	1st: Sept-Oct, 62% (n = 101) 2nd: Nov-Dec, 38% (n = 63)
2021	Written Qualifying Examinations, Medical Physics, Radiation and Cancer Biology	66% (127/193)	Web-based: 76% (n = 96) In-person: 21% (n = 27) Other: 3% (n = 4)	1st: Sept-Oct, 69% (n = 87)* 2nd: Nov-Dec, 31% (n = 39)

* One respondent did not complete this question.

ABR, and urged for the board to “pursue transition of these examinations to a web-based format in a way that preserves the integrity and reliability of these important examinations so that residents are able to achieve board certification in a timely manner.”^{2,3} Letters of support were submitted by elected leadership of American Society for Radiation Oncology (ASTRO), Society of Chairs of Academic Radiation Oncology Programs (SCAROP), and American College of Radiology (ACR), similarly advocating that this effort is both crucial and achievable.⁴⁻⁶ On June 22, the ABR announced in response its decision to move “currently unscheduled and future oral and computer-based exams to virtual platforms beginning in the first half of 2021” for all specialties under its purview. Currently, the radiation oncology written qualifying examinations remain scheduled in early December 2020 at third-party testing sites.⁷

Advantages of Web-Based Initial Certifying Examinations

The board organizations for ophthalmology and general surgery were among the first to declare an intent to transition the IC examinations to a remote web-based format to eliminate health risks and minimize protracted delays in certification.⁸⁻¹⁰ Similar commitments were made in subsequent weeks by the board organizations for dermatology, orthopedic surgery, physical medicine and rehabilitation, and anesthesiology.¹¹⁻¹⁴

Scheduling Considerations

Trainees have expressed that among the issues that have emerged as a result of the pandemic, a primary concern is a protracted delay in board certification.^{4,15} The commitment by the ABR to transition to remote administrations for all examinations utilizing such a platform beginning in 2021 represents extraordinary progress and demonstrates proactive leadership and an investment in its diplomates. Without dependence on third-party testing sites, long-distance travel, or physical distancing, virtual examinations will

effectively “immunize” the board certification schedule to further disruption by the COVID-19 pandemic.

Examination Accessibility

Remote examinations will substantially reduce the time and financial burden associated with on-site assessments, particularly for the oral examination. Previously, candidates unable to travel to or attend these examinations because of a medical reason, including pregnancy, or due to an important life event have been obligated to delay board certification for a year or more, a decision that can have significant implications regarding financial compensation and career trajectory.¹⁶ Accommodating these scheduling considerations for the 3 years required for successful completion of the IC examinations is challenging and may disproportionately impact women due to inherent challenges with long-distance travel throughout the last trimester of pregnancy and the immediate post-partum period.

Quality Assurance

A web-based format will allow for improved quality assurance and examination reliability for the oral certifying examination. As a candidate’s score on each examination section is primarily dependent on the evaluation of a single examiner, remote recordings will facilitate an objective review by a larger panel of evaluators for those candidates initially determined to have demonstrated marginal competency. This may reduce the risk of recall bias or examiner subjectivity and provide assurance to all stakeholders that the decision to fail a candidate on one or more of the examination sections is a consensus decision by a representative expert panel.

Pending Concerns

Concern remains that regional “surges” in COVID-19 cases may cause certain third-party testing sites to be unable to

accommodate the written qualifying examinations in physics, radiobiology, and clinical radiation oncology that remain scheduled for early December of 2020. As these examinations do not rely upon high-resolution diagnostic imaging, we encourage the ABR to also develop a contingency plan so that candidates are not obliged to delay these tests or further abbreviate the time spent preparing for the quickly approaching examinations planned for 2021.

Anticipated Challenges

The cost and effort required for the successful development and implementation of a web-based remote-proctoring examination format should not be underestimated. In addition to the numerous logistical and information technology considerations with such a transition, board organizations must assure security and psychometric reliability of these high-stakes examinations. Although the trajectory of the SARS-CoV-2 virus remains unclear, it can be anticipated that the standardized examination assessment industry will be significantly impacted in regard to reliability of scheduled dates and testing capacity due to physical distancing guidelines for the foreseeable future. As a result, it is prudent for organizations to initiate this effort as soon as possible so as to expedite this transition to reduce the number of candidates affected in the future.

Despite these considerable challenges, the ARRO Executive Committee has confidence that the transition to a web-based format will not only maintain the security of the IC examinations but achieve a new standard regarding their quality and reliability. Given the support for this effort already pledged by stakeholder organizations in radiology and radiation oncology alone, collaboration with other Member Boards and the ABMS could further expedite this effort for all candidates anticipating medical board certification.

Never Let a Good Crisis Go to Waste

The COVID-19 pandemic has caused substantial disruption to graduate medical education and board certification. It has also, however, provided the unique opportunity for our specialty to have a broader conversation regarding the current process of board certification. Consolidation of the three written examinations into a single pass-fail examination that assesses mastery of the consensus clinical knowledge *that a competent practicing radiation oncologist should reasonably demonstrate* has been endorsed by residents as well as representatives from SCAROP and ADROP.^{2,6}

Radiation oncology is 1 of only 2 of the 24 Member Boards with more than one written qualifying examination for initial certification, and is the only specialty that requires candidates to pass independent examinations in the basic sciences.¹⁷ A proposal for consolidation of the written qualifying examinations is not meant to minimize the

importance of physics and biology in radiation oncology; rather, the basic sciences should be meaningfully incorporated in clinically relevant settings throughout residency training. It may be more appropriate to assure such rigorous education occurs by establishing minimum educational training requirements.

The ABR recently performed a reappraisal for board certification in diagnostic radiology with a commitment to both identify and institute “enhancements and improvements in the future.”¹⁸ A consolidated radiation oncology written examination could facilitate greater incorporation of the basic sciences with concepts central to clinical practice. Such integration would incentivize greater in-depth understanding of the meaningful ways in which physics, radiobiology, and cancer biology are fundamental to the practice of radiation oncology. While this effort would require significant investment by a number of stakeholders, reframing radiation oncology training to more meaningfully incorporate the basic sciences into clinical practice may ultimately achieve significant innovation with the potential for substantial long-term impact.

Moving Forward

As the field of radiation oncology evolves, the board certification process charged to assess competency must similarly modernize. With collaborative investment by stakeholder organizations, the transition to a virtual examination has the opportunity to confer a long-term benefit to our specialty by assuring confidence in the certification dates as scheduled, improving examination accessibility, and advancing quality assurance. We commend the radiation oncology community, stakeholder organizations, and ABR leadership for their collaboration and effort in support of the future diplomates of radiation oncology and the patients we serve.

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