

Pathways to the Future of Nuclear Medicine

Hossein Jadvar, MD, PhD, MPH, MBA, SNMMI President

The SNMMI's Pathways to the Future of Nuclear Medicine Task Force is charged with leading the effort to identify physician training pathways that optimize the delivery of high-quality, value-driven clinical nuclear medicine practice. This will be a 2-step process. In phase 1, the task force will engage the nuclear medicine community in discussion of current environmental challenges and come to consensus on optimal training pathways that can address and alleviate these challenges. In phase 2, it will reach out to the radiology community, bringing radiology leaders into the discussion of the issues and final recommendations.

The task force members in phase 1 include representatives from the SNMMI leadership team (I as the chair, serving with President-Elect Sally Schwarz and Vice-President Elect and task force Associate Chair Bennett Greenspan), SNMMI Board of Directors (Vasken Dilsizian), SNMMI House of Delegates (Leonie Gordon), SNMMI Academic Council (David Brandon), SNMMI Young Professionals Committee (Erin Grady), SNMMI Technologist Section leadership (Aaron Scott and Sara Johnson), American Board of Nuclear Medicine (ABNM) (Munir Ghesani), American College of Nuclear Medicine (ACNM) (Patrick Colletti), ACNM Nuclear Medicine Resident Organization (Shana Elman), Accreditation Council for Graduate Medical Education–Nuclear Medicine Residency Review Committee (Jon Baldwin), and the Nuclear Medicine Program Directors (Daniel Lee).

The task force met for the first time in January during the SNMMI Mid-Winter Meeting in Orlando, FL, and started with the premise that nuclear medicine is an independent specialty and will remain so. However, challenges need to be addressed. New, well-trained practitioners are needed to replace those leaving the practice. For this to be accomplished, nuclear medicine must have a greater presence in medical schools and diagnostic radiology residency programs, and a pathway for nonradiologists to enter the field is essential.

Currently, too many people are being trained for too few jobs, and only physicians dual-boarded in radiology and nuclear medicine are now being hired. Radiology needs a paradigm shift in how it approaches nuclear medicine and molecular imaging. The culture is different: nuclear medicine physicians work with technologists closely and have more patient contact than most radiologists (except for some areas such as interventional radiology).

Everyone agrees that the focus must be on quality and value—but how these are best achieved remains an open question. Training should be measured in depth, but how does that translate into length and substance of training? The 4-month training in nuclear medicine for radiologists appears to be a nonnegotiable issue for the radiology community. With additional training occurring on the job, is it sufficient? Should nuclear medicine continue to offer training for 3 years?

As we move forward in our discussion, we need to be open minded. What constitutes the best training, and what does it take to be competent? What are the best pathways? Clearly diagnostic radiologists see value in ABNM certification: two-thirds opt for certification with or without a nuclear radiology certificate of added qualification from the American Board of Radiology (ABR). Yet radiology residents do not show sufficient interest in nuclear medicine as a fellowship option. We need to do a better public relations job with both radiology residency programs and medical schools. And we must find ways to make ABNM certification more attractive and accessible.

Looking to the future of our field, we expect that the vast majority of nuclear medicine practitioners will have dual ABR–ABNM certification; a relatively small percentage will have ABNM certification plus that of another nonimaging board; and a very small percentage will have only ABNM certification (these may include physicians who choose to train in nuclear medicine prior to additional training in other fields including radiology; physicians with significant interest and background in research who may also hold PhDs and plan for specialized research-oriented practice, whether in academia or industry; or international physicians who choose to train in the United States and then return to their home countries to practice).

The task force is considering the following training pathways: nuclear medicine residency (before or after certification in diagnostic radiology or for those certified in nonimaging fields); nuclear medicine embedded in diagnostic radiology (16 months during 4 years); 1-year nuclear medicine fellowship for radiologists; and combined nuclear medicine/diagnostic radiology residency program (after 1 year of clinical internship; 7 such programs are now in operation).

The group will explore the challenges associated with each of these pathways, with particular attention to the targeted physicians and eventual discussions with the radiology community (such as their perceived acceptance, support, etc.). Are the current options suitable? Can other pathways be devised that would be more suitable?

As this discussion advances, we must keep in mind all the exciting nuclear medicine and molecular imaging advances in diagnosis and treatment that are taking place around the globe—breakthroughs that improve patients' lives. We need to ensure that this momentum continues by establishing training and certification pathways that enable us to provide the best possible care for each patient.



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