Nuclear Medicine Innovations: Providing Access for All

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Many remarkable advances have been made in the field of nuclear medicine over the past few years. We have developed new radiopharmaceutical therapies, created novel imaging agents, expanded molecular imaging opportunities, and utilized artificial intelligence to assist in imaging, among many other accomplishments. While we can take pride in these innovations, we must also strive to make sure that they are accessible to the diversity of patients who need them.

As I begin my term as SNMMI president, I hope to continue on our path to improving our field with a constant focus on making these advances accessible to all patients. This includes ensuring that radiopharmaceuticals are properly reimbursed, growing and sustaining a workforce that can deliver these agents, maintaining sufficient cameras and instrumentation, refining multidisciplinary care pathways, and seeing that historically underserved populations, rural and urban, receive equitable imaging and treatment.

SNMMI will help to grow many emerging areas of interest within the field over the coming year. SNMMI’s Radiopharmaceutical Therapy Task Force meets regularly to define and implement the society’s strategy for radiopharmaceutical therapies. Specific areas of focus include coding and reimbursement, dosimetry, standardization of clinical education and training, and accreditation. A new therapy-focused web portal for members, researchers, the medical community, and patients was launched in December. It is regularly updated to provide direct access to educational activities, guidelines and appropriate use criteria, patients resources, and more.

A new Radiopharmaceutical Therapy Centers of Excellence program to establish criteria and standards to recognize facilities that provide excellence in radiopharmaceutical therapy was launched at the 2021 Virtual Annual Meeting. Interested sites can begin to apply now, and the first Radiopharmaceutical Therapy Centers of Excellence will be announced in September 2021. In 2022, a new web interface will be developed to facilitate the application process and be a resource for patients.

SNMMI is also creating a Radiopharmaceutical Therapy Registry that will be introduced later this year. This will provide the framework to support a community of practices committed to patient-centered imaging and therapy, patient safety, optimized radiation dose, improved outcomes, practice transformation, and innovation through ongoing data collection and quality improvement.

A new $^{177}$Lu Dosimetry Challenge was launched in February to measure the variability of the major steps involved in dosimetry calculation as well as final radiation absorbed dose estimates. The challenge includes 175 participants from 29 countries; data collected from participants will help to harmonize and standardize dosimetry for radiopharmaceutical therapy around the world.

The SNMMI Coding and Reimbursement Committee has created several workgroups to review the existing codes for radiopharmaceutical therapies, SPECT/CT procedures, and radiation oncology that could be used for nuclear medicine. In addition, the Dosimetry Taskforce is drafting an article and a resource on billing codes for radiopharmaceutical dosimetry.

To improve its continuing education and training offerings, SNMMI is conducting a thorough review of content related to therapy. A Graduate Medical Education Therapy Task Force has been created to conduct a thorough needs assessment for nuclear medicine residency training programs. SNMMI plans to create enduring content that can be paired with components of live lectures or can be used by nuclear medicine residency programs to create their own study guides. Finally, an in-person therapeutics conference focusing on integration of radiopharmaceutical therapy in clinical workflow is scheduled for November 11–14, 2021, in New Orleans, LA.

SNMMI has embraced the field of artificial intelligence as a way to support nuclear medicine and molecular imaging. At the 2021 Virtual Annual Meeting, an Artificial Intelligence Challenge was launched in conjunction with the Michael J. Fox Foundation to collect clinical data from DaTScan images. The SNMMI Artificial Intelligence Task Force is drafting a series of manuscripts for The Journal of Nuclear Medicine on artificial intelligence opportunities and challenges, as well as best practices for algorithm development and for evaluation. The task force also plans to host an Artificial Intelligence Summit in early 2022.

Research remains a top priority for SNMMI, and, as part of the society’s Value Initiative, it has added several new awards to encourage research among members. These include 2 Radiopharmaceutical Therapy Research fellowships, Cancer Cooperative Group grants, and 10 Medical and Science Student Research awards.

These and many other opportunities are being made available to SNMMI members as we collaborate to make nuclear medicine innovations available for all patients. I look forward to working with our SNMMI leadership, volunteers, and staff and encourage all members to join us as we work together toward this worthwhile goal.