

## Advancing Radiopharmaceutical Therapy

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**T**herapeutic applications have been a driving force behind nuclear medicine since its origins in treating benign and malignant thyroid disorders in the first part of the last century. In recent years, development and use of nuclear medicine therapies and theranostics have expanded dramatically. With this expansion, performing radiopharmaceutical therapies is becoming more complex and requires more facilities, resources, experience, and training than imaging alone. SNMMI holds a critical role as the thought, scientific, and practice leader in this area, leading the implementation of radiopharmaceutical therapy (RPT) as an important part of personalized patient care.

The society has developed a strategic plan to move science and practice forward, with initial activities focused on education and training, dosimetry, and coding and reimbursement. In creating the plan, we took many important factors into consideration, with the primary focus on the patient. How do we ensure that the workforce—physicians, technologists, scientists, and referring physicians, as well as patients, their families, and payers—are appropriately trained and educated in RPT? How do we best collaborate with our colleagues in other disciplines, from primary care, oncology, surgery, radiation oncology, and radiology? How do we educate the public about the experience, education, and training of our practitioners and the high standards and qualifications of our sites? Looking to the future, how should the RPT platform be designed and evolve?

To refine the direction of the plan, SNMMI conducted an in-depth survey of nuclear medicine practitioners to determine how facilities are using RPT now and their plans for the future. The survey explored what therapies are performed, how often, and in which department; what concerns exist related to therapies; and which specialties refer patients for therapy. It explored the role of dosimetry in therapies—whether it is performed and for what percentage of patients. Is it included in plans for the future, and if not, why not? It also explored the outlook for the future of RPT—do facilities plan to offer more therapies? What are impediments to doing so? Who should perform therapies? The results of the survey are now being used to refine the society's plan for moving forward.

**Education and training.** A task force has been created to determine the elements of a comprehensive continuing education curriculum, evaluate existing content, and identify gaps. A second task force is conducting a needs assessment for residency training programs and will define a core RPT curriculum. When these curricula are completed, the society will begin work to create new content where needed to fill in identified gaps and to ensure new treatments have appropriate educational support. We are also developing additional training fellowships to help broaden work force capabilities both clinically and for research.

**Dosimetry.** A task force has been established to consider the precise role of dosimetry in RPT, now and in the future. Utilizing survey responses, the group will outline gaps in current knowledge related to the use of dosimetry in drug development and clinical practice, define dosimetric terms, develop standardized protocols and measurements, and draft standard reports. They will interface with industry to ensure that standards under development can be reliably met by their products. Finally, the task force will publish literature on dosimetry showing how it impacts change in patient management.

**Coding and reimbursement.** A work group is reviewing existing codes for RPTs, evaluating the need for additional codes, and reviewing codes that can be utilized for nuclear medicine. They are reviewing common therapy pathways in the radiation oncology, nuclear medicine, medical physics, and dosimetry areas and identifying codes used in those areas that relate to RPT. In addition, they are reviewing reimbursement denials and developing sample medical necessity letters to help explain why RPT is the most effective option in specific circumstances. We are also closely monitoring reimbursement for therapeutic radiopharmaceuticals by a variety of payers.

**SNMMI Radiopharmaceutical Therapy Registry (RaPTR).** To help support quality and practice, SNMMI is exploring a registry that would provide the framework to support a community of practices committed to patient-centered imaging and therapy, patient safety, reduction in radiation dose, improved outcomes, practice transformation, and innovation through ongoing data collection and quality improvement.

The society has created and launched a comprehensive portal, Radiopharmaceutical Therapy Central ([www.snmmi.org/therapy](http://www.snmmi.org/therapy)), for SNMMI members that provides a wealth of information and content related to education, research, dosimetry, clinical guidelines, coding and reimbursement, and other aspects of RPTs. The portal will be continually updated and expanded with new information and resources.

This is an exciting time for RPT, with growing availability of a wide range of new treatments. We are at a critical expansion point, and SNMMI is working to ensure that high-quality RPT is accessible, evolving, and improving the lives of patients. SNMMI is taking strong, positive steps to ensure broad and expert utilization of RPT by providing education and training, standards, and networking for members while simultaneously serving as a resource for development and implementation.



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