

SNMMI Position Statement on Dose Optimization for Nuclear Medicine and Molecular Imaging Procedures

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In nuclear medicine and molecular imaging, small amounts of radioactive agents are administered to the patient to allow the physician to examine molecular processes within the body. These procedures are highly effective, safe and painless diagnostic tools that present physicians with a detailed view of what's going on inside an individual's body at the cellular level. For more than 60 years, these studies have been used to evaluate practically all systems within the body, including the heart and brain, as well as to image many types of cancer.

The Society of Nuclear Medicine and Molecular Imaging (SNMMI) and the SNMMI Technologist Section (SNMMI-TS) recognize that the use of low levels of radiation in these procedures entails some possible risk. Radiation dose for all nuclear medicine and molecular imaging procedures should be optimized so that the patient receives the smallest possible amount of radiopharmaceutical that will provide the appropriate diagnostic information. SNMMI and SNMMI-TS also recognize that if an appropriate procedure—one that can provide the physician with clinical information essential to the patient's treatment—is *not* performed when necessary due to fear of radiation, it can be detrimental to the patient.

The SNMMI and SNMMI-TS believe that the right test with the right dose should be given to the right patient at the right time. When nuclear medicine and molecular imaging procedures are performed correctly on appropriate patients, the benefits of the procedure very far outweigh the potential risks. The procedure that provides the most useful clinical information is the one that should be performed.

To ensure the appropriate use of these procedures, all nuclear medicine facilities should have comprehensive quality control measures in place, their nuclear medicine physicians should have up-to-date training, and their technologists should be appropriately trained and certified. SNMMI and SNMMI-TS and their members continually strive to improve quality and standards to ensure patients receive the best, safest and most appropriate care.