Purpose: To demonstrate how principles and recommendations of the Image Gently® and Image Wisely™ campaigns can be clinically implemented.

Methods: Implementation of Image Gently® and Image Wisely™ guidelines was a quality and safety improvement project for our Nuclear Medicine department in 2011. Pediatric administered radiopharmaceutical doses were compared to recommended doses in the North American Consensus Guidelines for Administered Radiopharmaceutical Activities in Children and Adolescents and the European Association of Nuclear Medicine Paediatric Dose Card. Adult administered radiopharmaceutical doses were compared to administered doses in NCRP Report No. 160 and IAEA Report No. 40.

Results: Evaluation of site administered radiopharmaceutical doses showed that nearly all doses were comparable to those recommended by national and international advisory bodies. Administered doses for the pediatric renogram and the adult gastric emptying were adjusted to match the recommendations and resultant image quality evaluated.

Conclusions: Radiation dose from nuclear medicine procedures should not be overlooked in the focus on CT dose reduction. An estimated 19.7 million nuclear medicine procedures are done annually in the U.S., with doses comparable to that from CT scans. Nuclear medicine departments should evaluate their pediatric administered radiopharmaceutical doses against the North American Consensus Guidelines for Administered Radiopharmaceutical Activities in Children and Adolescents and evaluate their adult doses against national and international standards. Administered doses that are not comparable to the recommended values should be adjusted accordingly. Additional steps to reduce patient radiation dose include decision support to reduce inappropriate ordering, technique optimization for the CT scan portion of SPECT/CT and PET/CT, use of vendor’s dose reduction camera and software technology, use of shorter lived radiopharmaceuticals, and right sizing patient doses by weight.