

Image Gently® and Society of Nuclear Medicine Launch “Go With the Guidelines” Pediatric Nuclear Medicine Campaign to “Child-Size” Radiopharmaceutical Dose

This fall, Image Gently® and the Society of Nuclear Medicine (SNM) have unveiled the “Go With the Guidelines” awareness campaign, encouraging community hospitals, academic hospitals and clinics to observe new guidelines on radiopharmaceutical dose for pediatric patients. To foster awareness, Image Gently and SNM are distributing thousands of 11x14-inch posters that remind medical practitioners to use these new guidelines for 11 frequently performed imaging studies in children. Posters are provided at no cost and can be found inside medical imaging journals beginning fall 2011. The poster can be downloaded now from the [Image Gently website \(www.imagegently.org\)](http://www.imagegently.org).

“The new poster and the pediatric-specific protocols should be helpful in reducing dose in hospitals and clinics, especially among facilities that perform limited numbers of nuclear medicine procedures in children,” said Michael J. Gelfand, MD, past president of SNM and chief of nuclear medicine at Cincinnati Children’s Hospital. A companion Image Gently/SNM publication, “*What You Should Know About Pediatric Nuclear Medicine and Radiation Safety*,” can help families gain a better understanding of the complex factors involved in providing safe, effective nuclear medicine exams to children.

“These radiopharmaceutical dose recommendations, calculated on a ‘straight’ weight basis, have been tested in children’s hospitals and are compatible with high-quality imaging and further dose reduction in the first decades of life,” Gelfand said. “These recommendations will be of value to community hospitals, academic hospitals and clinics.”

Standardization helps ensure that “all pediatric nuclear medicine providers consistently get quality medical images while using only the smallest amount of radiation needed,” noted S. Ted Treves, MD, strategy leader of the Image Gently/SNM initiative and chief of Nuclear Medicine and Molecular Imaging at Children’s Hospital Boston. “Since adoption of these new guidelines, children’s and academic hospitals have reported high-quality imaging with low patient dose.”

The need to reduce pediatric radiopharmaceutical administered dose first gained prominence in a study by Treves and colleagues, published in the May 2008 issue of the *Journal of Nuclear Medicine (JNM)*. In the *JNM* article, Treves identified a sizeable variation in administered doses given to children at 13 North American pediatric clinics. In one instance, the dose was 20 times higher than at another hospital. A radiopharmaceutical dose too high may expose the child to unnecessary radiation without benefit. A dose too low may risk poor diagnostic image quality and require a repeat study that needlessly exposes a young patient to additional radiation.

The response by the medical imaging community was swift and coordinated. In January 2007, the Alliance for Radiation Safety in Pediatric Imaging — founded by the Society for Pediatric Radiology (SPR), the American College of Radiology (ACR), the American Society of Radiologic Technologists (ASRT) and the American Association of Physicists in Medicine (AAPM) — launched Image Gently. Over the ensuing months, the campaign focused on computed tomography, parent communication, interventional radiology, diagnostic fluoroscopy and, since June 2010, pediatric nuclear medicine.

Following a series of symposia capped by an April 2010 consensus workshop, in August 2010, the SNM and SPR board of directors approved the North American Consensus Guidelines for Administered Radiopharmaceutical Activities in Children and Adolescents, and the ACR is incorporating these guidelines as well. In February 2011, the *JNM* published these guidelines.

“As advocates for children, the development and dissemination of effective dose-lowering guidelines such as these is of utmost importance,” said Marguerite T. Parisi, MD, MS, chair of SPR’s Nuclear Medicine Committee and chief of PET/CT and Ultrasound at Seattle Children’s Hospital.

Frederic H. Fahey, DSc, president-elect of SNM and director of Physics in Nuclear Medicine and Molecular Imaging at Children’s Hospital Boston, characterized the new guidelines as “a great accomplishment.” The priority now, he said, is “to focus on bringing these guidelines to the attention of the rest of the nuclear medicine community, especially to medical practitioners in our general hospitals. We want everyone to be performing quality nuclear medicine with the least amount of radiation delivered to the patient as possible.”

And so, with the launch of the “Go With the Guidelines” campaign, the Alliance for Radiation Safety in Pediatric Imaging reiterates this central Image Gently message: As children may be more sensitive to radiation received

from medical imaging scans than adults, and cumulative radiation exposure to their smaller bodies could, over time, have adverse effects, radiologists who perform nuclear medicine imaging exams on children, are urged to:

- Follow the North American Guidelines for Pediatric Nuclear Medicine
- Determine the appropriate radiopharmaceutical dose based on body weight

The new nuclear medicine guidelines are available on the websites of the SNM (www.snm.org), ACR (www.acr.org), SPR (www.pedrad.org) and at www.imagegently.org.