

# From the Guest Editor's Notebook

## The *Image Gently* Campaign: Working Together to Change Practice

**A** recent article in the *New England Journal of Medicine* [1], November 29, 2007, raised important concerns about the use of CT in children. There may be disagreement within the medical community about the accuracy of the risk models or the degree to which the risks of radiation were emphasized by the authors. These arguments will not be settled in the near term. However, one fact is indisputable: We must continue our efforts to do a better job of reducing radiation dose to children if and when they need a CT scan.

This is the guiding principle of the Alliance for Radiation Safety in Pediatric Imaging, a 13-member organization consisting of leading medical societies, agencies, and regulatory groups that have joined forces to impact patient care and change practice through an educational and awareness campaign (Fig. 1).

Building on the past efforts of each of the participating organizations such as the Society for Pediatric Radiology–sponsored ALARA (as low as reasonably achievable) conferences [2], American College of Radiology (ACR) accreditation programs [3], and an American Society of Radiologic Technologists professional development course titled “Pediatric Body CT: Techniques and Tactics” [4], this collaborative campaign represents nearly 400,000 health care professionals promoting appropriate and high-quality CT for children.

The Alliance, formed in July 2007, has been effective to date due to the volunteerism and passion of its members. An Alliance Website was created by the lone executive administrator (with professional advice) of one of the organizations, who also coined the term “image gently.” The beautiful photograph of a child in an adult-sized life jacket (Fig. 1) reminds radiologists and technologists to “child-size” CT protocols. The child shown in the photograph is the daughter of one of the pediatric radiologists on the steering committee, and he also took the photo.

Many of the organizations listed in Appendix 1 have allowed their professionals to work on this campaign gratis. Trade and scientific journals have generously donated public service advertisements. One company has provided an unrestricted educational grant that

provided critical funding at the inception of the project for travel and the logo. The members of the Alliance for Radiation Safety in Pediatric Imaging are listed in Appendix 1.

The message of the *Image Gently* campaign is simple: Reduce or “child-size” the amount of radiation used when obtaining a CT scan in children. This message is targeted to the radiologists who perform relatively few CT examinations of pediatric patients in their hospital or outpatient practice but who, in aggregate, perform many pediatric CT examinations throughout the United States. We know radiologists and radiology technologists want to do the best for their pediatric patients but may be hampered by a lack of familiarity with pediatric protocols.

The *Image Gently* campaign wishes to provide those radiologists and technologists who work in predominantly “adult” hospital settings with the tools to decrease radiation by doing four simple things.

**First, reduce or “child-size” the amount of radiation used.** This can be accomplished simply by contacting your medical physicist and asking him or her to determine the baseline radiation dose for an adult for your equipment and compare that dose with the *ACR Standards* [5]. If the doses are higher than those suggested, reduce your technique for adult patients. Next, access the *Image Gently* Website ([www.imagegently.org](http://www.imagegently.org)) and view the protocols provided for children. The beauty of these protocols is that they are independent of equipment manufacturer, age of machine, or number of detectors. Although your institution or site may wish to lower scan technique even more, these protocols provide a starting point for making this important change at your site. Work with radiology technologists to implement the protocols. These professionals control the critical “last step” before a scan is obtained.

**Second, scan only when necessary.** An increased awareness about the need to dis-

**One size does not fit all...**

There's no question — CT helps us save kids' lives!  
But...When we image, radiation matters!  
Children are more sensitive to radiation.  
What we do now lasts their lifetime.  
So, when we image, let's image gently.  
More is often not better.

When CT is the right thing to do:

- Child size the kVp and mA
- One scan (single phase) is often enough
- Scan only the indicated area

A timely message from the Alliance for Radiation Safety in Pediatric Imaging.

**image gently™**

Visit [www.imagegently.org](http://www.imagegently.org).  
Made possible by an unrestricted educational grant from GE Healthcare.

This Alliance for Radiation Safety in Pediatric Imaging is:  
The Society for Pediatric Radiology - American Association of Physicians in Medicine - American College of Radiology - American Society of Radiology Technologists - American Academy of Pediatrics - American Osteopathic College of Radiology - American Registry of Radiologic Technologists  
American Roentgen Ray Society - Association of University Radiologists - Conference of Radiation Control Program Directors - National Council on Radiation Protection - Radiological Society of North America - Society of Computed Body Tomography and Magnetic Resonance

**Fig. 1**—Sample advertisement used for educational and awareness campaign conducted by Alliance for Radiation Safety in Pediatric Imaging, a 13-member organization consisting of leading medical societies, agencies, and regulatory groups that have joined forces to impact patient care and change practice.

cuss the risk–benefit ratio for performance of a CT examination enhances the role of the radiologist consultant and provides an opportunity for educational interaction with the child’s pediatrician, who has unique medical knowledge critical to the care of the patient. As noted by the National Council on Radiation Protection & Measurements [6], “any decision by a medical provider to expose a patient to ionizing radiation shall be justified.” This means that the expected benefits to the patient must exceed the overall risk.

**Third, scan only the indicated region.** Protocols in children should be individualized. A follow-up CT scan in an asymptomatic child with an incidental lung nodule is unlikely to require that the entire chest be rescanned.

**Fourth, scan once; multiphase scanning is usually not necessary in children.** CT with and without contrast material is rarely needed in children. Multiphase imaging often will double or triple the dose to the child and rarely adds to the diagnostic information of the study [7].

It is estimated that between 4 and 7 million CT scans were obtained in children in 2007 [8]. That number is growing. A recent article by Broder et al. [9] reported a roughly 300–400% increase in cervical spine and chest CT scans in the pediatric emergency setting. Many of these studies directly impact the clinical diagnosis of the referring physician; increase his or her confidence in the diagnosis [10]; and in some settings, such as trauma, may obviate exploratory surgery. There is no question that CT is an extremely valuable diagnostic tool in children. Although CT is often beneficial for the individual patient, the increase in radiation has become a public health issue. Radiologists and radiology technologists can follow the four steps listed earlier to comply with the ALARA principle.

The *Image Gently* Alliance is not just an alliance of organizations; it is a dynamic alliance of individual health care professionals—the radiologist, radiology technologist, medical physicist, and pediatrician. This team approach creates a powerful force that can change practice. We ask that each radiology practice take a fresh look at their protocols. Then go to the Alliance Website, [www.image-gently.org](http://www.image-gently.org), and “take the pledge.” Sign on and pledge to *Image Gently* in your practice.

So when you image, *Image Gently*. Please remember to “child-size” your scans; one size does not fit all.

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## APPENDIX I: Members of the Alliance for Radiation Safety in Pediatric Imaging

### Founding organizations:

Society for Pediatric Radiology  
American College of Radiology  
American Society of Radiologic Technologists  
American Association of Physicists in Medicine

### Affiliate Alliance organizations:

American Academy of Pediatrics  
American Osteopathic College of Radiology  
American Registry of Radiologic Technologists  
American Roentgen Ray Society  
Association of University Radiologists  
Conference of Radiation Control Program Directors  
National Council on Radiation Protection & Measurements  
Radiological Society of North America  
Society of Computed Body Tomography and Magnetic Resonance