

# Alliance

## For Radiation Safety In Pediatric Imaging



### Founding Organizations

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



### Steering Committee

Marilyn J. Goske, MD  
Kimberly E. Applegate, MD  
Dorothy I. Bulas, MD  
Jennifer K. Boylan, MD  
Penny Butler, MS  
Michael Callahan, MD  
Brian Coley, MD  
Steven Don, MD  
Shawn Farley  
Donald P. Frush, MD  
Marta Hernanz-Schulman, MD  
Susan John, MD  
Neil Johnson, MD  
Sue C. Kaste, DO  
Sarah Kaupp, Parent Advocate  
Greg Morrison, MA, RT(R), CNMT  
Ceela Mc Elveny  
Keith Strauss, MS  
Steven Don, MD  
Manrita Sidhu, MD  
Ted Treves, MD



### Contact:

Coreen Bell  
Alliance Administrative Director  
Department of Radiology, MLC 5031  
Cincinnati Children's Hospital Medical Center  
3333 Burnet Avenue  
Cincinnati, OH 45229-3039  
513-803-1599  
imagegently@AOL.com

Jennifer Boylan, MA  
The Society for Pediatric Radiology  
1891 Preston White Drive  
Reston, VA 20191  
703-648-0681  
FAX 703-880-0013  
jboylan@acr.org

[www.imagegently.org](http://www.imagegently.org)



A brief letter to parents regarding medical imaging in children from the **Alliance for Radiation Safety in Pediatric Imaging**

*A longer version of this letter is available on our website at [www.imagegently.org](http://www.imagegently.org)*

Dear parents and caregivers,

A recent scientific study (Pearce MS et al. Lancet DOI 10.1016/S0140-0736(12)60815-0) on the potential risk of cancer from CT scans in children is receiving a great deal of media attention. The Alliance for Radiation Safety in Pediatric Imaging would like to comment on this important issue. The Alliance for Radiation Safety in Pediatric Imaging, comprised of more than 70 medical organizations, is committed to radiation protection for children worldwide.

We understand that parents will have many questions about CT scans and ionizing radiation. Most questions are a result of their child having a CT scan. After the scan, parents may become concerned about the ionizing radiation used during the scan. We would like to share with you key points from the discussions we have had with parents to answer their questions.

CT scans are an amazing way of seeing inside the body in less than a minute, require no sedation and may help the doctor find out what is wrong with your child. The scans use a small amount of ionizing radiation. Parents may ask "Is there is risk from a medical test that uses ionizing radiation? What is the risk? And will it cause cancer in my child?" These are the most frequent questions that the experts from the Image Gently campaign get asked.

Here is what we tell the parents we speak with... "We do not know if medical imaging causes cancer. But we should remain cautious and act as if there is a small risk." Continued study of this important issue is needed and is ongoing. Over the many years that doctors and other scientists have studied this question, there have been results on either side of this question with differing opinions regarding potential risks from these exams. This most recent study suggests that there is a very small risk from CT scans in children based on their study which spans the years from the early 1980's through 2008. Now, you might say that this uncertainty is not helpful. As a parent you understandably want a definite answer. However, at present, medical science does not have the final answer. Fortunately, this may not be as much of a problem as it would seem. If we follow the Image Gently philosophy of being cautious, and perform imaging tests only when necessary and at the lowest possible radiation dose to answer the clinical question, then we maximize the benefits of these exams and minimize any potential risk.

As parents, here are some questions you can ask your doctor:

- What is the name of the test you would like to do on my child?
- Does the test involve ionizing radiation?
- How will having this exam improve my child's health care?
- Are there alternatives that do not use radiation which are equally as good?
- Will my child receive a "kid-size" radiation dose?
- Is the technologist performing the scan certified by ARRT (American Registry of Radiologic Technologists)?
- Is the doctor reading the CT scan certified by the American Board of Radiology?
- Is this facility accredited by the American College of Radiology (ACR-accredited)?

You are encouraged to keep a record of your child's previous imaging tests. The Image Gently Medical Imaging record card is available on our website.

When there is a concern about radiation, parents should not become scared, but should learn more about the test and feel it is OK to ask questions.

It is important to remember that we all take risks in everyday life for a benefit. Think about driving to the grocery store for food for dinner. The benefit of getting the food outweighs the small risk of a car accident. The risk of a car accident may be higher than any potential risk from a CT scan (from current scientific studies) in a population or group of patients. When risk is discussed such as risk from a car accident, the risk applies to a population of people or children, not one person or child. The risks are average risks. This makes scientific studies even harder to apply to a single person or child...and harder to understand as to how it applies to your child. Yet, these types of risk studies are very important as we learn more and it helps us do a better job in improving care and decreasing risk for our patients.

In addition, the estimated radiation dose from CT of the abdomen among a group of children's hospitals in the United States, recently reported at a national pediatric radiology meeting was 40% lower than CT dose estimates from the United Kingdom from the early 2000s. This means that radiation dose from CT scans is decreasing. Also, new technology from CT manufacturers will continue to lower this estimated dose. This is good news.

Finally, in the United States, there is an approximately 40% chance of being diagnosed with cancer during our lifetime. So, cancer is a relatively common disease in this country. Currently, there is no way to know if a cancer occurs if it was a result of genes or inheriting this tendency from your parents, from the environment or a combination of these and other effects.

It is important as parents and caregivers to be thoughtful, to ask questions and to partner with your doctor in the care of your child. It means realizing that there is risk in our daily lives when we do needed and important actions and we should not be fearful, but work to minimize the risk. This same approach should be used in medical care.

We hope you have found this letter helpful in your understanding of medical imaging and its benefits and small risks for your child. We welcome your ideas and comments about our website ([www.imagegently.com](http://www.imagegently.com)). You may contact us at our email address: [imagegently@aol.com](mailto:imagegently@aol.com).

**The Image Gently Steering committee:**

Marilyn J. Goske, MD, FAAP  
Chair, Alliance for Radiation Safety in Pediatric  
Imaging  
Cincinnati Children's Hospital Medical Center

Kimberly Applegate, MD, MS, FACR  
Emory University Hospital

Coreen Bell, Administrative Director  
Alliance for Radiation Safety in Pediatric Imaging  
Cincinnati Children's Hospital Medical Center

Maria Ines Boechat, MD, FACR  
President, World Federation of Pediatric Imaging  
Mattel Children's Hospital at UCLA

Jennifer K. Boylan, M.A., Executive Director  
The Society for Pediatric Radiology

Dorothy I. Bulas, MD  
Children's National Medical Center

Priscilla F. Butler, M.S., Medical Physicist and  
Senior Director  
American College of Radiology

Michael Callahan, MD  
Boston Children's Hospital Boston, MA

Brian Coley, MD, Radiologist in Chief  
Cincinnati Children's Hospital Medical Center

Steven Don, MD  
Mallinckrodt Institute of Radiology St Louis, MO

Donald Frush, MD  
Board Chair, Society for Pediatric Radiology  
Duke University Medical Center

Marta Hernanz-Schulman MD, FAAP, FACR  
Vanderbilt Children's Hospital Nashville TN

Susan D. John, MD, Radiologist in Chief  
The University of Texas Medical School, Houston

Sue C. Kaste, DO  
President, Society for Pediatric Radiology  
St. Jude Children's Research Hospital

Sarah Kaupp, Parent Advisor  
Alliance for Radiation Safety in Pediatric Imaging  
Cincinnati Children's Hospital Medical Center

Greg Morrison, MA, RT(R), CNMT, CAE  
COO, American Society of Radiologic Technologist

Manrita Sidhu, MD, FSIR  
Seattle Radiologists

Keith J. Strauss, M.S., Medical Imaging Physicist  
Cincinnati Children's Hospital Medical Center

S. Ted Treves, MD, FACNM  
Boston Children's Hospital, MA