



IMAGE WISELY™
Radiation Safety in
Adult Medical Imaging

FACT SHEET

Image Wisely™ is a collaborative effort of the American College of Radiology (ACR); the Radiological Society of North America (RSNA); the American Association of Physicists in Medicine (AAPM); and the American Society of Radiologic Technologists (ASRT). Image Wisely™ follows on the remarkable success of Image Gently™, which since its January 2007 start continues to focus attention on safe imaging of pediatric patients.

Our goals are to ensure that adult patients receive only necessary scans; help medical imaging providers use the optimal radiation dose for each exam; and ultimately help providers reduce the radiation dose that Americans receive from imaging.

Radiation Exposure in X-ray and CT Examinations

This online resource explains what X-rays are and gives radiation dose estimates for common medical imaging procedures. It also explains how these dose estimates compare to the amount of background radiation that each person experiences from natural sources.

Number of Imaging Procedures That Use Ionizing Radiation Performed Nationwide

332 Million – [X-Ray](#) Exams (Radiography)
87 Million – [Computed Tomography](#) (CT) Exams
41 Million – [Nuclear Medicine](#) Exams
40 Million – [Interventional Radiology](#) Exams
2 Million – [Positron Emission Tomography](#) (PET) Exams

Number of Imaging Exams That Do Not Use Radiation Performed Nationwide

159 Million – [Ultrasound](#) (Sonography) Exams
26 Million – [Magnetic Resonance Imaging](#) (MRI) Exams

Overall growth in the use of medical imaging is approximately 2 percent nationally; in line with other physician services. Patients should keep a record of their X-ray history and before getting a scan, ask their physician:

- Why do I need this exam?
- How will having this exam improve my health care?
- Are there alternatives that do not use ionizing radiation that are equally effective?
- Is this facility [accredited](#)?
- Is my child receiving a “kid-size” radiation dose? (for pediatric exams)

Patient Imaging History Record cards are available for download or printing from the Image Wisely website [<insert link>](#).

Steps to Reduce Unnecessary Imaging and Optimize Radiation Dose per Scan

Accreditation Programs

Accreditation helps facilities minimize likelihood of adverse events and improve the quality of medical imaging by setting stringent training standards for physicians and technologists, requiring frequent equipment evaluation by medical physicists, and peer-reviewed verification of image quality and radiation dose.

Appropriateness Criteria

ACR Appropriateness Criteria help physicians prescribe the most appropriate imaging exam for more than 200 clinical conditions. These criteria help reduce unnecessary exams and ensure that patients get the right scan, at the right time.

CT Dose Index Registry

The Dose Index Registry (DIR) collects patient-anonymous dose information for CT scans, allowing imaging facilities and hospitals to compare their CT dose indices against national benchmarks and identify when such thresholds are exceeded. Facilities will receive periodic feedback comparing their scan results, by body part and by scan type, to national aggregate results.

Image GentlySM Campaign

The Image Gently campaign is an initiative of the Alliance for Radiation Safety in Pediatric Imaging. The campaign goal is to change practice by increasing awareness of opportunities to lower radiation dose in the imaging of children.

Image Wisely Member Organizations

American College of Radiology (ACR)

The ACR is a national, medical professional organization serving more than 34,000 radiologists, radiation oncologists, interventional radiologists, nuclear medicine physicians and medical physicists dedicated to improving the quality and safety of medical imaging and radiation oncology. ACR's mission is to serve patients and society by advancing the science of radiology, improving the quality of patient care, positively influencing the socio-economics of the practice of radiology, providing continuing education for radiology and allied health professions and conducting research for the future of radiology.

Radiological Society of North America (RSNA)

The RSNA is an association of more than 46,000 radiologists, radiation oncologists, medical physicists and related scientists committed to excellence in patient care by means of education and research. Through its peer-reviewed journals and education programs, RSNA continually informs its members and other radiology professionals of the latest technologies and research developments designed to optimize dose and improve patient safety. The Society is based in Oak Brook, Ill. (RSNA.org)

American Association of Physicists in Medicine (AAPM)

The AAPM is a scientific and professional organization, founded in 1958, composed of more than 7,000 scientists whose clinical practice is dedicated to ensuring accuracy, safety and quality in the use of radiation in medical procedures such as medical imaging and radiation therapy.

American Society of Radiologic Technologists (ASRT)

The American Society of Radiologic Technologists represents more than 138,000 members who perform medical imaging procedures or plan and deliver radiation therapy. The ASRT advances radiologic technology through education, advocacy and research. Its mission is to provide radiologic technologists with the knowledge, resources and support they need to provide safe, high-quality patient care.

Recent Imaging Regulation

Federal

As a result of the Medical Improvements for Patients and Providers Act (MIPPA) of 2008, effective Jan. 1, 2012, all providers who bill Medicare for PET, MRI, CT and nuclear medicine under part B of the Medicare Physician Fee Schedule must be accredited in order to receive technical component reimbursement from Medicare.

State

Commencing July 1, 2013, facilities that furnish CT scans in California must become accredited by the ACR (or another national organization that is approved by the federal Centers for Medicare and Medicaid Services) or an accrediting agency approved by the Medical Board of California or the California Department of Public Health (DPH).