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RSNA Statement on Radiation Dose

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The Radiological Society of North America (RSNA) is committed to excellence in patient care through education and research.

- Radiologists, radiation oncologists, medical physicists and other radiology professionals are committed to conscientious implementation of medical procedures that utilize ionizing radiation while maintaining rigorous safety standards. This commitment is the basis for the "As Low As Reasonably Achievable (ALARA)" principle that has been applied by radiologists for decades. Radiologists consult with patients' physicians and other providers who order imaging examinations to guide the patient to the best procedure to address the clinical circumstance.

- The radiology community understands that certain imaging procedures are associated with potential risks, which in each patient's case must be weighed against the potential clinical benefit. With appropriate utilization, dose-optimized diagnostic protocols, and treatments performed based on developed practice guidelines, the potential benefits of imaging and therapy typically far outweigh the risks.

- Medical imaging equipment must undergo strict quality assurance testing and imaging protocols must be reviewed by radiologists per regulatory guidance.

- In addition to promoting appropriate utilization, radiologists and medical physicists have worked together to improve the safety of imaging exams by lowering radiation dose without sacrificing diagnostic quality. Radiation oncologists and medical physicists have developed treatment regimens that improve outcomes while minimizing side effects and risks. Working with radiology equipment manufacturers, radiologic scientists are directly involved in the development of technologies and protocols to ensure patient safety in medical imaging and treatments.

- The RSNA endorses the position statement of the American Association of Physicists in Medicine (AAPM), which outlines its members' commitment to optimizing radiation dose in medical imaging. (AAPM Position Statement on Radiation Risks from Medical Imaging Procedures, November 16, 2023, https://www.aapm.org/)

- In April 2019, the AAPM published a statement recommending that patient gonadal and fetal shielding during X-ray based diagnostic imaging should be discontinued as routine practice because this offers negligible or no benefit to patient health. In January 2021, the National Council on Radiation Protection and Measurements (NCRP) released recommendations for ending routine gonadal shielding during radiography. RSNA supports the AAPM statement and NCRP recommendation.

- To increase awareness of radiation risks and to explore opportunities to improve patient safety through appropriate utilization, quality assurance and dose optimization, RSNA has partnered with the American College of Radiology (ACR), the American Association of Physicists in Medicine (AAPM) and the American Society of Radiologic Technologists (ASRT) to conduct the Image Wisely campaign. Image Wisely is designed to raise awareness and promote education about radiation protection for patients undergoing medical imaging examinations.

- *ImageWisely.org*, *ImageGently.org*, and *RadiologyInfo.org* all have patient-directed content, which answers common patient questions about risks and benefits of medical imaging procedures, along with information on radiation exposure, contrast materials, anesthesia, radiation therapy procedures and other safety concerns.

- RSNA supports a requirement that all personnel involved in medical imaging and radiation therapy procedures performed on patients meet well-defined educational and credentialing criteria. In addition, the RSNA supports the establishment of accreditation requirements for medical imaging and radiation therapy facilities, a radiation dose index registry, consistent and mandatory reporting methods for medical radiation errors, and inclusion of appropriate utilization criteria into order entry systems.

- RSNA endorses the AAPM/ACR/HPS Joint Statement on Proper Use of Radiation Dose Metric Tracking for Patients Undergoing Medical Imaging Exams. The decision to perform a medical imaging exam should be based on clinical grounds, including the information available from prior imaging results, and not on the dose from prior imaging-related radiation exposures.

RSNA is a strong advocate for quality, safety, equity and adherence to appropriateness criteria in medical imaging and radiation oncology. Through its peer-reviewed journals, education programs and annual scientific assembly, RSNA continually informs radiologists, medical physicists, radiation oncologists and other radiology professionals of the latest technologies and research developments designed to optimize dose and improve patient safety.