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NEWS

RSNA Press Release

Benefits of Medical Imaging Exams Outweigh Risks

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At A Glance

- Although x- and gamma-radiation have been added to the list of recognized carcinogens, x-rays are safe when used with care.
- The amount of radiation used in most diagnostic imaging procedures is very small.
- The decision to have an x-ray exam is based on the likelihood of benefit versus the potential risk.
- Patients with concerns about radiation from diagnostic imaging exams should talk to their doctors.

CHICAGO - Radiologists and medical physicists are urging patients not to forego diagnostic imaging exams because of the fear of radiation. Such fears are expected to surface in light of today's release of the National Toxicology Program's (NTP) 11th Report on Carcinogens. The report names x-radiation and gamma-radiation to its list of known human carcinogens.

"Patients should understand that there are many benefits from medical imaging," said G. Donald Frey, Ph.D., professor of radiology at Medical University of South Carolina in Charleston. "It would be a tragedy if the fear of radiation as a possible cause of cancer kept anyone from getting a needed study."

Dr. Frey pointed out that NTP based its information on data from people who received radiation doses from 20 to several hundred times the amount used for medical imaging. "The risk to people who receive diagnostic studies is extremely low," he said.

The knowledge that radiation could cause cancer is not new. The link between high doses of radiation and cancer was established shortly after Wilhelm Roentgen discovered x-rays in 1895. Since that time, radiologists and medical physicists have worked closely together to maximize image quality, while reducing dose of diagnostic x-rays to minimize if not eliminate the risks associated with medical imaging procedures.

"Today's x-ray procedures are done with monitored doses below the range that has been definitively proven to cause cancer," said Michael Brant-Zawadzki, M.D., clinical professor of radiology at Stanford University School of Medicine and medical director of radiology at Hoag Memorial Hospital in Newport Beach, Calif.

The decision to have an x-ray exam is based on the likelihood of benefit from the exam and the potential risk from radiation. For low-dose procedures, such as plain-film x-rays, the benefits far outweigh the minimal risks. For higher dose exams, such as computed tomography (CT) scans or those that use contrast materials like barium, the radiologist may

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want to consider the patient's history of x-ray exposure. If a patient has had numerous x-ray exams, keeping an x-ray history record will help a doctor make an informed decision. As with other medical procedures, x-rays are safe when used with care.

"If people have concerns about radiation they should discuss the issues with the radiologist or medical physicist," Dr. Frey said.

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For more information on x-ray safety and a listing of the effective radiation dosages associated with common medical imaging procedures, visit www.radiologyinfo.org/content/safety/xray_safety.htm.

RSNA is an association of more than 37,000 radiologists, radiation oncologists and related scientists committed to promoting excellence in radiology through education and by fostering research, with the ultimate goal of improving patient care. The Society is based in Oak Brook, Ill.

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