Medical imaging benefits far outweigh radiation risks

March 6 2009

In response to a recent report by the National Council on Radiation Protection and Measurement (NCRP) stating that the U.S. population is exposed to seven times more radiation from medical imaging exams than in 1980, SNM urges Americans to consider the proven benefits of such imaging.

SNM and its 17,000 members physicians, clinicians and technologists support the use of diagnostic imaging when deemed medically necessary by a physician and in the best interest of the patient. In such cases, diagnostic imaging could make a significant difference in the diagnosis, treatment or overall management of disease.

"Nuclear medicine and molecular imaging hold great promise for diagnosis and tailoring treatments for patients with cancer, neurological or cardiovascular disorders," said Robert W. Atcher, PhD, MBA, president of SNM. "We support giving patients the care they need by qualified, accredited nuclear medicine and molecular imaging physicians."

Citing studies such as the National Oncologic PET Registry (NOPR), Dr. Atcher described how medical imaging has led to a change in treatment in more than one out of three patients with common forms of cancer. This means that physicians successfully use PET scans to detect disease earlier, provide more targeted treatment and therapy, and often eliminate the need for exploratory surgery.

To further protect patients, SNM is actively collaborating with other organizations representing oncologists, cardiologists, radiologists and other medical professions to ensure that anyone—whether a physician or technologist—is adequately trained and credentialed prior to performing a nuclear medicine procedure. For example, at a recent SNM educational symposium held in conjunction with the American College of Nuclear Physicians, more than 100 imaging cases were reviewed by approximately 300 medical professionals to certify their knowledge of the procedure. The society advocates incorporating such maintenance of certification (MOC) guarantees into every nuclear medicine professional's practice.

Positron emission tomography (PET)—a state-of-the-art molecular imaging test—is a noninvasive, painless molecular imaging technology that allows physicians to determine how organs and tissues inside the body are functioning on a molecular and cellular level. PET is a powerful diagnostic tool that is advancing the understanding of underlying causes of disease and improving the way in which many diseases are detected and treated.

PET can detect disease at the earliest stages, since disease processes often begin with functional changes at the cellular level. Risks involved with PET scans are minimal, with the benefits often far outweighing the risks. In fact, PET scans can eliminate the need for exploratory tests and help individuals avoid potentially expensive and invasive surgeries later. During PET scans, patients are exposed to radioactive material, but in very low doses that do not affect normal bodily functions.

"Millions of Americans benefit each year from nuclear medicine procedures used to diagnose and treat a wide variety of diseases," said Dr. Atcher. "The use of radiation in these procedures provides doctors with information that would otherwise require less accurate tests or exploratory surgery, necessitate more costly and invasive procedures, or

simply be unavailable. The risks of not performing a needed medical exam are usually much greater than the risks of the radiation exposures associated with the exam."

Source: Society of Nuclear Medicine