



Ensuring Safe, Accurate Medical Radiation Procedures

Statement by the American Society of Radiologic Technologists

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“Medical Radiation: An Overview of the Issues”

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Mr. Chairman and members of the Committee, my name is Sandra Hayden, and I am a radiation therapist at MD Anderson Cancer Center in Houston. I also serve on the board of the American Society of Radiologic Technologists, and it is in that role that I address you today. On behalf of ASRT’s 134,000 members, thank you for the opportunity to contribute to this dialogue on the quality of radiation therapy and other medical procedures that use radiation.

As recently as the 1950s, few cancer patients had any hope of long-term survival. Diagnosis of the disease was difficult, and treatment options were limited both in type and effectiveness. Today, thanks to better diagnostic capabilities and aggressive treatment, many types of cancer are being cured and more people are surviving the disease than ever before.

In particular, external beam radiation therapy, which delivers a high dose of cancer-killing radiation directly to a tumor site, has dramatically improved the chances of survival for

many cancer patients. Radiation therapy is now the cornerstone of cancer management programs worldwide. Nearly two-thirds of Americans diagnosed with cancer – more than 1 million patients a year – undergo radiation therapy as part of their treatment. Administered accurately, radiation therapy can ease pain, control the spread of cancer and, in many cases, cure patients of disease. However, radiation therapy must be precise in order to be effective.

Accuracy is equally important during the medical imaging exams that physicians rely upon to diagnose cancer. Medical imaging is used during virtually every stage of a patient's cancer management program, from initial detection to staging the tumor's size and shape to following up to ensure that treatment has been effective. The x-ray exams, CT scans and other imaging tests performed on cancer patients use radiation, and radiation comes with some risk. Errors, although rare, can cause devastating side effects.

The ASRT believes the best way to ensure the quality and safety of medical radiation procedures is to establish national educational and certification standards for technical personnel who perform them.

CT scanners, gamma cameras and linear accelerators are some of the most complex medical equipment in the world. However, this technology is ineffective in the wrong hands. That's because the quality of any medical radiation procedure is directly linked to the skill and competence of the person performing it. Individuals must have extensive education and training to perform the exam or treatment correctly.

The effective detection and treatment of cancer demands precision, reliability, consistency and a level of teamwork that few other professions can match. The medical team responsible for detecting and treating cancer includes the patient's primary care physician, a radiologic technologist who performs the imaging exams, a radiologist who interprets those

images and makes a diagnosis, a radiation oncologist who determines the best course of treatment, a medical physicist who designs the treatment protocol, a medical dosimetrist who calculates the proper radiation dosage, and a radiation therapist who delivers the prescribed amount of radiation and provides direct patient care.

Patient safety is in the hands of these individuals, yet many members of the cancer management team are largely unregulated in terms of education, experience and competence. Radiographers are not licensed or regulated in eight states; radiation therapists are not regulated in 17 states; medical physicists have no oversight in 31 states; and no state licenses medical dosimetrists. Even in states with some type of regulation, the rules are sometimes so weak that they offer patients little protection. In some states, hairdressers are better regulated than people who perform medical radiation procedures.

Unqualified personnel are a danger to patients. An underexposed x-ray can't reveal a malignant tumor, and an inaccurate radiation therapy treatment can't stop its spread. Even worse, when medical radiation is used improperly it can harm the very patients it was meant to help.

Cancer patients should not have to wonder whether the person performing their CT scan or planning their radiation therapy treatment is competent.

The solution is the Consistency, Accuracy, Responsibility and Excellence in Medical Imaging and Radiation Therapy bill.

The CARE bill, introduced in the House of Representatives by Rep. John Barrow in September 2009 as H.R. 3652, asks the federal government to establish minimum educational and credentialing standards for technical personnel who perform medical imaging examinations and who plan or deliver radiation therapy treatments. Each state then would be responsible for regulating personnel according to those standards.

The CARE bill uses a three-tiered approach to improving quality and safety. First, individuals who perform medical imaging or radiation therapy would be required to graduate from a specialized educational program. Second, they would be required to pass a national certification exam. And third, they would be required to maintain competency by obtaining continuing education. Together, these three criteria will help ensure that personnel have the skills to perform their duties competently and free of error.

Only qualified personnel should be allowed to perform medical imaging and radiation therapy. When a CT scan has to be repeated because of improper positioning or poor technique, the patient receives double the radiation dose. Taking a CT scan or delivering radiation therapy involves much more than just pushing a button. Patients could be injured or even killed if this equipment is not used properly. The CARE bill will ensure a minimum level of education, knowledge and skill for those who are responsible for medical radiation procedures.

In addition, the CARE bill will reduce health care costs. Repeated medical imaging examinations cost the U.S. health care system millions of dollars annually in needless medical bills, and the federal government pays for many of those mistakes. If we can reduce the number of repeated x-ray, fluoroscopy and sonography examinations by just 1 percent, the ASRT conservatively estimates Medicare could save \$50 million to \$70 million over five years.

More importantly, reducing errors in medical imaging will mean that cancer patients will receive an earlier diagnosis, when the disease is most treatable and before it has spread to other parts of the body. To improve the quality of patient care, the ASRT's 134,000 members encourage Congress to pass the CARE bill.

The ASRT is not alone in its support for the CARE bill. The bill is backed by the Alliance for Quality Medical Imaging and Radiation Therapy, a coalition of 25 organizations that

represent more than 500,000 health care professionals. In addition, the bill has received support from patient advocacy groups, including the American Cancer Society.

The safety, quality and cost of medical imaging procedures affects us all. Only competent personnel should be allowed to perform these procedures. The CARE bill will ensure a minimum level of education and skill for those who are responsible for medical imaging and radiation therapy. By requiring personnel to meet national standards, the CARE bill would help ensure that patients receive the best care possible, provided by the most qualified caregivers possible.

As an additional step to improve the quality and safety of medical radiation procedures, the ASRT calls for the establishment of consistent and mandatory methods of reporting medical radiation errors.

Errors that occur during medical radiation procedures, while rare, must be reported and investigated so that others may learn from them. Quality-oriented medical facilities and health care professionals continually strive to learn from their mistakes to ensure that they are not repeated. By investigating how, why and where medical errors occur, providers can implement safeguards to prevent them.

Currently, state and federal oversight of radiation therapy errors is uncoordinated and inconsistent. A variety of agencies and regulatory bodies are involved, and they often do not share information with one another. Reporting of medical radiation errors is voluntary in some states, and other states do not require that errors be documented at all. As a result, important information is lost that could be used to establish patterns of concern or identify critical issues.

The ASRT calls for mandatory, public reporting of errors that occur during medical radiation procedures, and also for a consistent system of data collection and tracking.

A reporting model to consider is the FDA's MedWatch program, which takes a systemic approach to the reporting of adverse medical events. This is the approach recommended by the Agency for Healthcare Research and Quality. Establishment of a reporting system such as MedWatch would represent an unprecedented opportunity to build the knowledge base on patient safety and reduce errors.

Thanks to medical imaging and radiation therapy, millions of Americans are cancer survivors. The vast majority of medical radiation procedures are administered safely and successfully. However, radiation comes with risk, and more can and should be done to improve the safety of patients. The recommendations offered by ASRT will lead to safer patient care and will help more patients win the battle against cancer.

Thank you again for inviting me to speak on this important issue.