

Can you find the tumor  
on this x-ray?



No One Can.

That's why educated and qualified radiologic technologists  
are so important to patient care.



This x-ray film is underexposed and hides a child's life-threatening Wilms' tumor. An unqualified person produced this image.

**R**adiologic technologists are the medical personnel who perform diagnostic imaging examinations and administer radiation therapy treatments. Radiologic imaging technologists and radiation therapists are educated in anatomy, patient positioning, examination techniques, equipment protocols, radiation safety, radiation protection and basic patient care.

So much depends on the quality of medical imaging examinations and radiation therapy treatments. When properly performed, they give doctors the ability to detect injury, diagnose disease and treat illness. When improperly performed, they are useless and unnecessarily expose the patient to radiation.

That's why it's important for the health care professionals who perform radiologic procedures to be appropriately educated and trained.





**R**adiologic technologists often specialize in a particular diagnostic imaging area. In this picture, a computed tomography technologist prepares a patient for an examination. CT technologists use a rotating x-ray unit to capture "slices" of anatomy at different levels within the body. A computer then assembles the individual slices, creating a diagnostic image. With CT technology, physicians can view the inside of organs — a feat not possible with general radiography.

## What We Do

Radiologic technologists are responsible for accurately positioning patients, shielding patients prior to the examination and operating medical imaging and radiation therapy equipment. Technologists are responsible for duties such as ensuring that a quality diagnostic image is produced, completing radiation therapy treatments and assisting physicians with interventional procedures. In addition, technologists work closely with radiologists, the physicians who interpret medical images, to either diagnose or rule out disease or injury.

Radiologic technologists often specialize in a particular diagnostic imaging area:

- ★ Bone Densitometry
- ★ Cardiovascular-Interventional
- ★ Computed Tomography
- ★ Magnetic Resonance
- ★ Mammography
- ★ Nuclear Medicine
- ★ Quality Management
- ★ Radiography
- ★ Sonography

The radiologic technologists who specialize in radiation therapy, which is the delivery of high doses of radiation to treat cancer and other diseases, are radiation therapists and medical dosimetrists.

Radiologist assistants are experienced, registered radiographers who have obtained extensive education and certification that qualifies them to serve as radiologist extenders. RAs work under the supervision of a radiologist to provide patient care in the diagnostic and interventional imaging environment. The addition of RAs to the radiology team helps improve productivity and efficiency.





**R**adiation therapists administer targeted doses of radiation to the patient's body to treat cancer and other diseases. They are highly skilled medical professionals educated in physics, radiation safety, anatomy and patient care. They typically see each patient three to five days a week throughout a four- to seven-week treatment plan.

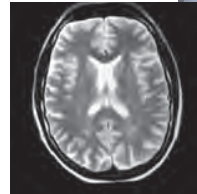
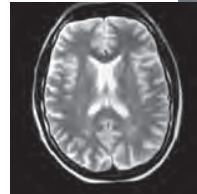
## What It Takes

**R**adiologic technology is a high-touch, high-tech profession. It requires both the knowledge and empathy to care for people and the skills to operate state-of-the-art equipment.

Registered radiologic technologists must complete at least two years of formal education in an accredited hospital-based program or a two- or four-year educational program in the radiologic sciences at an academic institution.

In addition, they must prove their competency by passing a national certification examination that tests their understanding of radiation protection, patient care techniques and examination protocols.

To remain registered, radiologic technologists must earn continuing education credits. Continuing education provides technologists with an avenue to stay up to date on technological advances and trends in the radiologic sciences.





**I**n addition to completing coursework in anatomy, radiation safety and examination techniques, radiologic technology students participate in supervised clinical rotations as part of their educational program requirements.

## Why It Matters

**R**adiologic technologists play a major role on the health care team. As technical experts in medical imaging and radiation therapy, technologists are responsible for patient care, radiation safety procedures and quality diagnostic images that physicians use to diagnose illness and disease. As a result, radiologic technologists are crucial to making sure patients receive the best care possible from diagnosis to treatment.

Radiologic technologists can help:

- ★ Ensure that quality information is presented for diagnosis and that quality radiation therapy treatments are delivered, leading to accurate diagnosis, treatment and cure. Poor quality images can lead to misdiagnosis, additional testing, delays in treatment and needless anxiety for the patient.
- ★ Reduce health care costs by lowering the number of medical imaging examinations that must be repeated due to improper positioning or poor technique. Repeated imaging examinations and delayed diagnosis and treatment caused by improperly performed examinations cost the U.S. health care system millions of dollars annually in unnecessary medical bills.
- ★ Improve the safety of medical imaging and radiation therapy procedures. Administered properly, radiation is an invaluable tool in the diagnosis, treatment and management of disease. But most radiologic science procedures also carry a potential health risk, and radiation can be harmful if misadministered.







“ I am sure that many people would be surprised to learn that **there are no uniform licensure standards for the technologists who perform tests such as MRIs and CT scans every day in our country.** Currently radiologic technologists are regulated at the state level and those standards can vary widely between states, from those with stringent standards to those that do not regulate the education or competency of these medical professionals at all. Patient safety can be impacted by improper positioning or poor technique by the technologist, which can lead to misreading of scans and a need for duplicative tests. ”



**Congressman Joseph R. Pitts, R-Pa.,** *Chairman of the House Energy and Commerce Committee Subcommittee on Health, at a hearing held June 8, 2012, titled “The Appropriateness of Standards for Medical Imaging and Radiation Therapy Technologists”*

For more information  
about the radiologic technology profession,  
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