



### What is a Radiologic Technologist (RT)?

Radiologic technologists (RTs) are healthcare professionals who provide a variety of diagnostic and therapeutic services within the healthcare industry. RTs practice in hospitals, clinics, and physician's offices. They are educated in anatomy, patient positioning, examination techniques, equipment protocols, radiation safety, and patient care. There are numerous disciplines and specialties within the radiologic science profession, most of which use ionizing radiation to accomplish the task of health care delivery.

To earn the ARRT credential of Registered Radiologic Technologist, individuals must pass a national certification exam. Exam eligibility requires that individuals document an associates degree or higher AND graduate from an accredited hospital based radiography program. To remain credentialed, they must also earn 24 continuing education credits every two years and complete continuing qualifications requirements (CQR) every 10 years.



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**School of Health Sciences**

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A CAREER IN  
**RADIOLOGIC  
TECHNOLOGY**  
SETTING THE STANDARD FOR  
EXCELLENCE IN IMAGING SERVICES



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## Radiologic technologists can specialize in many different areas:

- Bone densitometry
- Cardiovascular-interventional radiography
- Certified Radiology Administrator® (CRA)
- Computed tomography (CT)
- Magnetic resonance imaging (MRI)
- Mammography
- Nuclear medicine
- Radiation therapy
- Radiography
- Radiology management
- Sonography
- Vascular-interventional radiography

**Bone Densitometry Technologists** working in this advanced imaging area create images of individuals at risk of osteoporosis using specialized x-ray equipment which aids in diagnosis and treatment of patients' bone health ([www.arrt.org](http://www.arrt.org)).

**Cardiovascular-Interventional Technologists** use sophisticated imaging techniques to guide tools into the heart. These techniques can treat many cardiac conditions internally without open surgery. Contrast can be injected to help visualize anatomy.

**Certified Radiology Administrator® (CRA)**  
The Certified Radiology Administrator® (CRA) designation speaks volumes about high standards of achievement attained for medical imaging leadership. It is the only professional credential tailored for radiology administrators, focusing on management in human resources, asset resources, finance, operations, and communication. CRAs are quickly becoming the preferred candidate of choice in hiring decisions. ([www.crainfo.org](http://www.crainfo.org))

**Computed Tomography Technologists** use a rotating x-ray unit and sensor assembly to observe "slices" of anatomy within the body. During processing, the computer stacks and assembles slices, creating a series of images that physicians can use to view the inside of the organs layer by layer, a feat not possible with general radiography. CT images can be reconstructed to create 3-D representation of the anatomy of interest.



**Magnetic Resonance Technologists** are specially trained to operate MR equipment. During an MRI scan, atoms in the patient's body are exposed to a strong magnetic field. Signals from the atoms are measured by the machine to produce detailed images. MRI images can be reconstructed to create a 3-D representation of the body.

**Mammographers** use radiation to produce images for screening or diagnostic procedures for detection of breast disease. These individuals also provide breast health education. Under the federal Mammography Quality Standards Act, mammographers must meet stringent educational and experience criteria to perform mammography procedures.

**Nuclear Medicine Technologists** administer radioactive materials (radiopharmaceuticals) to a patient and use a special scanner to detect gamma rays emitted by the radiopharmaceuticals to create an image of the body part under examination to obtain functional information about organs, tissues, and bone.

**Radiation Therapists** administer targeted doses of radiation to patient's body to treat cancer or other diseases. They are highly skilled and educated in physics, radiation safety, patient anatomy and patient care. They typically see patients three to five times throughout a four to seven week treatment plan.

**Radiographers** use radiation (x-rays) to produce 2-D images of the tissues, organs, bones, and vessels of the body that assist in the diagnosis of disease or injury. The images are usually recorded digitally with modern equipment.

**Radiology Managers** Radiologic technologists in a managerial role are responsible for operations as well

as leadership and supervision of personnel working within assigned modalities, locations and support areas. They are typically in charge of a radiology department, clinic, or other facility which provides imaging services.

**Registered Radiologist Assistant** To improve efficiency and patient care, many medical facilities look to registered radiologist assistants (R.R.A.s) to provide advanced level support to radiologists. To become an R.R.A., individuals must complete an advanced educational program and meet a range of additional requirements. Job responsibilities might include assessing and managing patients, performing select clinical procedures, and reporting initial findings to a radiologist ([www.arrt.org](http://www.arrt.org)).

**Sonographers** use sound waves to obtain images of organs and tissues in the body. During the examination, the technologist places a transducer in contact with the body that emits high-frequency sound waves that pass through the body and send back "echoes" as they bounce off organs and tissues.

**Vascular-Interventional Technologists** also use sophisticated imaging techniques to help guide catheters, vena cava filters, stents or other interventional tools through the veins and arteries of the body. Interventional radiography is one of few medical imaging modalities that offers 4-D imaging.

**Educators** in radiologic sciences work in all facets of the educational spectrum – from two-year certificate programs to baccalaureate and master programs. Many educators work at hospital programs and others are employed at colleges and universities