



A World of Career Opportunities in Radiologic Technology



Career Opportunities

Medical imaging technology is a science combining advanced technology and human compassion. Medical imaging technologists use their knowledge of physics, human anatomy, and physiology to create permanent medical images. This profession requires a dependable personality with a mature and caring nature. Medical imaging services are offered in various settings such as hospitals, healthcare facilities, physicians' offices, mobile imaging companies, industrial plants, research centers, and government agencies. Commercial sales and marketing positions are also available in the field.

People in this profession may specialize in a particular area or pursue careers as educators, researchers, consultants, or administrators. The constant growth in this field has created many new and exciting career opportunities. There are several choices to make when considering a career in medical imaging technology.

Salaries vary nationwide; however, the range is usually reflective of training, education, demand, and experience. Employment opportunities are available throughout the world and offer medical imaging technologists flexible work situations to accommodate various lifestyles and needs. Admission requirements for education programs vary; however, high school graduation is usually required and basic math and science skills are important. Upon completion of an accredited program, the graduate is eligible for certification in the field of medical imaging technology. To obtain a list of accredited educational programs contact:

Joint Review Committee on Education in Radiologic Technology (JRCERT)
20 N. Wacker Drive, Suite 2850
Chicago, IL 60606-3182
Phone: (312) 704-5300
E-mail: mail@jrcert.org
www.jrcert.org



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AHRA: The Association for Medical Imaging Management is a resource and catalyst for the development of professional leadership in medical imaging management. To find out more, please contact:

490-B Boston Post Road, Suite 200, Sudbury, MA 01776
ph: 800-334-2472 · fax: 978-443-8046
info@ahraonline.org · www.ahraonline.org

Radiographer



The term diagnostic radiography is used to describe a variety of radiographic or x-ray examinations. Most people are familiar with chest x-rays and also know that x-rays are the best way to diagnose broken bones. The radiographer performs these procedures as well as procedures that require the use of contrast agents that make it possible to study organs that otherwise

cannot be seen on x-rays. Radiographers are valued members of the healthcare team. Through a blend of classroom and clinical training, students learn radiographic equipment operation, patient positioning techniques, radiation safety, and patient care.

CERTIFICATION REQUIREMENTS

Most employers require certification as a radiographer by the American Registry of Radiologic Technologists (ARRT). State licensure may be required.

EDUCATIONAL PROGRAMS

- ◆ 4 year baccalaureate degree program
- ◆ 2 year associate degree program
- ◆ 2 year hospital certificate program

CAREER OPPORTUNITIES

Career opportunities vary at this level. Positions are available in hospitals, imaging centers, private medical offices, sales, research, and commercial areas.



Computed Tomography (CT) Technologist



Computed tomography (CT) technologists are responsible for taking detailed cross sectional images of the internal structures of the human body. They are able to do this with advanced computerized x-ray equipment. These members of the healthcare team work closely with radiologists to provide radiographic studies that assist with patient diagnosis and treatment.

CERTIFICATION REQUIREMENTS

This is not an entry-level position. Courses are available through community colleges and commercial sources that give specialized training in CT scanning. This training prepares certified radiographers for an advanced certification test in CT scanning administered by the ARRT. Most employers require, as a minimum, certification as a radiographer by the American Registry of Radiologic Technologists (ARRT). State licensure may be required.

EDUCATIONAL PROGRAMS

On the job training is often offered to experienced medical radiographers who exhibit competence in their field and have a genuine desire to learn and advance their careers. This is usually a career ladder position for those who have worked as a radiographer.

CAREER OPPORTUNITIES

Opportunities for CT technologists are available in hospitals, imaging centers, mobile imaging companies, sales, applications, and marketing.



Diagnostic Medical Sonographer

A diagnostic medical sonographer combines creativity with advanced knowledge of human anatomy and advanced ultrasound imaging equipment to produce images of the human body. Sonographers use high frequency sound waves (much like sonar) to demonstrate body structures and organs. These images assist the physicians in the diagnosis and treatment of medical conditions. The sonographer must be able to work independently to provide high quality images. Experience in radiologic technology is often desired by employers. Employees who exhibit competence in their current area of specialization may be trained on the job.

CERTIFICATION REQUIREMENTS

Most employers require certification from the American Registry of Diagnostic Medical Sonographers (ARDMS). Specific requirements for certification may be obtained by contacting:
ARDMS

51 Monroe Street, Plaza East One
Rockville, MD 20850-2400
Phone: (800) 541-9754
www.ardms.org

EDUCATIONAL PROGRAMS

- ◆ 4 year baccalaureate degree program
- ◆ 2 year associate degree program
- ◆ 1 year certificate program

A list of educational programs can be obtained through the Society of Diagnostic Medical Sonographers (SDMS):
2745 N. Dallas Pkwy, Suite 350
Plano, TX 75093-8730
Phone: (800) 229-9506
www.sdms.org

CAREER OPPORTUNITIES

Career opportunities are available in hospitals, imaging centers, educational institutions, private medical offices, clinical research labs, sales and marketing. Sonographers may work in departments of radiology, cardiology, obstetrics, and vascular imaging.



Mammographer



Mammographers use ionizing radiation to produce images of the breast for screening, diagnosis, and treatment purposes. A mammographer is responsible for creating a clear image that can be read by a radiologist, oncologist, etc, to make an accurate diagnosis. Even routine mammograms can be stressful for patients. Therefore, mammographers must be proficient in making the patient as comfortable as possible throughout the process.

CERTIFICATION REQUIREMENTS

Most employers require advanced certification in mammography by the American Registry of Radiologic Technologists (ARRT). State licensure may be required.

EDUCATIONAL PROGRAMS

This is not an entry-level position and experience in radiologic technology, sonography, or ultrasound is often required. Courses are available through community colleges and commercial sources that give specialized training in mammography. This training prepares certified radiographers for an advanced certification test in mammography, administered by the ARRT. Employees who exhibit competence in their current area of specialization may be trained on the job.

CAREER OPPORTUNITIES

Career opportunities are available in hospitals, imaging centers, educational institutions, private medical offices, clinical research labs, sales, and marketing.



Nuclear Medicine Technologist

Nuclear medicine technologists are specialized members of the imaging healthcare team. They perform procedures that analyze both the anatomy and physiology of the human body. These procedures involve administering a radioactive drug to the patient and then analyzing the distribution and concentration of that radioactive drug with gamma cameras. Nuclear medicine technologists also administer radioactive drugs to treat certain cancers.

Some nuclear medicine technologists specialize in a clinical area called positron emission tomography (PET). Technologists specializing in PET operate a special imaging device that produces 3-D images of the human body.

CERTIFICATION REQUIREMENTS

Most employers require certification by a national credentialing body, either the American Registry of Radiologic Technologists (ARRT) or the Nuclear Medicine Technologist Certification Board (NMTCB). In many instances state licensure may also be required.

EDUCATION PROGRAMS

- ◆ 4 year baccalaureate degree program
- ◆ 2 year associate degree program
- ◆ 2 year hospital-based certificate program
- ◆ 1 year certificate program (after training in a related field)

CAREER OPPORTUNITIES

Career opportunities are available in hospitals, imaging centers, educational institutions, private medical offices, clinical research labs, sales, and marketing.



Magnetic Resonance Imaging (MRI) Technologist



MRI technologists use radio waves, powerful magnets, and computers to create images of the body. Technologists who work in this field must have good computer skills and a strong knowledge of cross sectional human anatomy.

CERTIFICATION REQUIREMENTS

Most employers require certification as a radiographer by the American Registry of Radiologic Technologists (ARRT). State licensure and advanced certification may be required.

EDUCATION PROGRAMS

This is not an entry-level position and experience in radiologic technology is often required. Courses are available through community colleges and commercial sources that give specialized training in MRI scanning. This training prepares certified radiographers for an advanced certification test in MRI scanning, administered by the ARRT. Employees who exhibit competence in their current area of specialization may be trained on the job.

CAREER OPPORTUNITIES

Opportunities for MRI technologists are available in hospitals, imaging centers, mobile imaging companies, sales, applications, and marketing.



Special Procedure Technologist

Special procedure technologists work closely with physicians in evaluating and treating certain diseases. They use specialized x-ray equipment to study the blood vessels of the body. These technologists also assist physicians who perform procedures to widen narrowed blood vessels. This fast-paced specialty requires quick and sometimes independent thinking and an advanced knowledge of human anatomy. The technologist must also be able to handle sophisticated x-ray, computer, image processing, and patient -monitoring equipment.

CERTIFICATION REQUIREMENTS

Most employers require certification as a radiographer by the American Registry of Radiologic Technologists (ARRT). State licensure may be required.

EDUCATIONAL PROGRAMS

- ◆ Three month to one year certificate programs are available to those individuals who are trained and certified as radiographers.
- ◆ On the job training as part of a career ladder program is often available for experienced radiographers displaying a desire to advance and learn new technologies.

ADVANCED CERTIFICATIONS

Many employers require advanced certification by accrediting body (eg, ARRT) in specialty if applicable.

CAREER OPPORTUNITIES

Opportunities as a special procedure technologist are available mainly in a hospital setting. Special procedure technologists may also work in sales, applications, marketing, or on mobile van systems.



Radiation Therapist

The radiation therapist is responsible for treating patients with a radiation beam or source. This healthcare professional will also assist the radiation oncologist with the set up and dosage that the patient will receive during the treatment. Radiation therapy patients are treated for cancer, and the therapist who works with the patients usually develops a special, supportive relationship with the patient and family members. Radiation therapists must possess a high degree of sensitivity and caring in addition to excellent technical skills.

CERTIFICATION REQUIREMENTS

Most employers require certification in radiation therapy by the American Registry of Radiologic Technologists (ARRT). State licensure may also be required.

EDUCATIONAL PROGRAMS

Currently the following programs are available; however, it is possible that in the future, a baccalaureate degree will be required.

- ◆ 4 year baccalaureate degree program
- ◆ 2 - 3 year associate degree program with special consideration given to registered radiologic technologists
- ◆ 2 year hospital based certificate program
- ◆ 1 year certificate program after completion of an American Medical Association certified radiography program

CAREER OPPORTUNITIES

Areas of opportunities include hospitals, free-standing clinics, research, sales, and marketing.



Radiology Nurse



Radiology nurses work as part of the radiology team to provide specialized and routine nursing care to patients in the radiology departments. Radiology nurses may work in special procedures, breast imaging, CT scan, general radiology, or any area in which patients need specialized nursing care.

CAREER OPPORTUNITIES

Opportunities for radiology nurses are available in hospitals, imaging centers, sales, applications, and marketing.

CERTIFICATION REQUIREMENTS

This is not an entry-level position. Most employers require certification in critical care, advanced cardiac life support (ACLS), and conscious sedation.

EDUCATIONAL PROGRAMS

- ◆ 4 year baccalaureate degree program (nursing science)
- ◆ 3 year degree program
- ◆ 2 year associate degree program



Radiology Information Systems (RIS) Specialist



Radiology information systems (RIS) specialists are responsible for implementing, maintaining, and updating radiology information computer systems. Working with radiology staff, they oversee the computer systems that provide information about patient exams, results, and histories.

CERTIFICATION REQUIREMENTS

This is not an entry-level position. Some experienced employees who exhibit competence in computers may be trained and promoted. Most employers require computer training and/or radiology experience.

EDUCATIONAL PROGRAMS

- ◆ 4 year baccalaureate degree program (computer science)
- ◆ 2 year associate degree program (computer science)
- ◆ Vendor training

CAREER OPPORTUNITIES

Opportunities for RIS specialists are available in hospitals, imaging centers, sales, applications, and marketing.



Picture Archival and Communication Systems (PACS) Administrator

Picture archival and communication systems (PACS) administrators are responsible for implementing, maintaining, and updating radiologic PACS. Working with radiology staff, they oversee the computer systems that provide images and information about patient exams, results, and histories. PACS connect to different radiographic and imaging equipment and make images produced on that equipment available to authorized users.

CERTIFICATION REQUIREMENTS

This is not an entry-level position. Some experienced employees who exhibit competence in computers may be trained and promoted. Most employers require computer training and/or radiology experience.

EDUCATIONAL PROGRAMS

- ◆ 4 year baccalaureate degree program (computer science)
- ◆ 2 year associates degree program (computer science)

CAREER OPPORTUNITIES

Opportunities for PACS administrators are available in hospitals, imaging centers, sales, applications, and marketing.



Radiologist Assistant (RA)



Radiologist assistants (RAs) function as radiologic technologists who extend the capacity of the radiologist, falling between the role of radiologist and radiographer. RAs manage and assess patients, perform certain imaging procedures, evaluate images, and make image observations.

CERTIFICATION REQUIREMENTS

This is not an entry-level position and certification as a radiographer by the American Registry of Radiologic Technologists (ARRT) is required. State licensure may be required. This training prepares certified radiographers for an advanced certification test to obtain RA certification, administered by the ARRT.

EDUCATIONAL PROGRAMS

- ◆ 4 year baccalaureate degree program
- ◆ 2 year associate degree program
- ◆ 2 year hospital certificate program

CAREER OPPORTUNITIES

Opportunities for RAs are available in hospitals, imaging centers, sales, applications, and marketing.



Radiology Practitioner Assistant (RPA)



Radiology practitioner assistants (RPAs) supplement the radiologist. RPAs perform the same procedures as radiologic technologists, as well as invasive imaging procedures. RPAs also evaluate images, prepare reports for the radiologist, and assist in managerial duties.

CERTIFICATION REQUIREMENTS

This is not an entry-level position. Most employers require certification as a radiographer by the American Registry of Radiologic Technologists (ARRT). State licensure may be required. Must be a graduate of a Certification Board for Radiology Practitioner Assistants (CBRPA) recognized educational program and successfully pass the CBRPA certification exam. Specific requirements for certification may be obtained by contacting CBRPA:

225 Dupont St, P.O. Box 1626,
Lander, WY 82520
Phone: (307) 335-5201
www.cbrpa.org

EDUCATIONAL PROGRAMS

- ◆ 4 year baccalaureate degree program
- ◆ 2 year associate degree program
- ◆ 2 year hospital certificate program

CAREER OPPORTUNITIES

Opportunities for RPAs are available in hospitals, imaging centers, sales, applications, and marketing.



Management/Education/Marketing

Radiologic technologists may also progress to different levels of opportunity in the areas of education, management, and marketing. Positions are available as department directors and supervisors as well as education program directors. Some may choose to seek positions using their imaging experience in sales, marketing, or consulting with a medical oriented business. Others who gain a bachelors degree and go on to pursue a masters degree in health administration may choose to seek a position as a hospital administrator, a vice president in a hospital, or a manager of a business for radiologists. Most people in management positions hire and supervise all non-physician employees. They develop strategic plans, prepare budgets, and investigate and implement future technologies. Most universities require radiology educators who teach on a bachelors level (or higher) and have a masters in education and/or masters in radiology science. This is also a new requirement for all radiology technology program directors.

EDUCATIONAL PROGRAMS

- ◆ Masters in business administration, masters in health administration, master of science in radiologic science administration and/or education
- ◆ 4 year baccalaureate degree program
- ◆ 2 year associate degree program
- ◆ 2 year hospital based certificate program
- ◆ Many careers are based on a minimum baccalaureate degree with experience in an area of special interests

ADVANCED CERTIFICATION

For information about becoming a Certified Radiology Administrator (CRA) or for job listings, contact:
AHRA: The Association for Medical Imaging Management
490-B Boston Post Road, Suite 200
Sudbury, MA 01776
800/334-2472
www.crainfo.org
www.ahraonline.org

CAREER OPPORTUNITIES

Several career levels exist depending on education and experience. Positions are available in hospitals, private businesses, large corporations, research, and colleges.

