

Radiologic Technology

Includes:

- Magnetic resonance technologist
- Medical dosimetrist
- Radiation therapist
- Radiographer

Magnetic Resonance Technologist

Magnetic resonance technologists use radiowaves, magnetic fields, and computerized equipment to produce images of body tissues. MR technologists strive to provide quality patient care while producing patient images that permit accurate diagnoses. MR technologists use problem-solving and critical-thinking skills to adapt procedural requirements to the patient and specific area of study.



Career Description

Magnetic resonance technologists apply knowledge of anatomy, physiology, positioning, and MR protocols in the performance of their responsibilities. They must be able to communicate effectively with patients, other health professionals, and the public. The MR technologist must show competence and compassion in meeting the special needs of the patient.



Employment Characteristics

Magnetic resonance technologists are employed in health care facilities—including hospitals, specialized imaging centers, urgent care clinics, and physician offices—and as educators or imaging department administrators.



Salary

Salary and benefits are generally competitive with other health professions and vary according to experience and employment location. Refer to Section IV,

Table 5 of this *Directory* for more information, or see www.ama-assn.org/go/hpsalary.



Educational Programs

Length. Program length varies, depending on program design, objectives, and the degree or certificate awarded.

Curriculum. Many, though not all, programs require certification as a radiographer as a prerequisite. The curriculum of an accredited program includes an extensive component of technical and professional courses, including an emphasis on structured competency-based clinical education. Contact a particular program for information on specific courses and prerequisites.

Medical Dosimetrist

Medical dosimetrists, in collaboration with radiation oncologists and medical physicists, generate radiation dose distributions and dose calculations to design radiation treatment plans that will deliver a prescribed dose of radiation to a defined anatomic area.



Career Description

Medical dosimetrists apply knowledge of anatomy and physiology, oncologic pathology, radiation biology, radiation oncology techniques, treatment planning and dosimetry procedures, and computer computation in the performance of their duties. The medical dosimetrist accepts responsibility for designing a radiation oncologist (physician)-prescribed course of radiation therapy, considering dose-limiting structures and the need for special casts and immobilization devices. They must be able to communicate effectively with other health care professionals.



Employment Characteristics

Medical dosimetrists are employed in health care facilities, including hospitals and cancer centers.



Salary

Salary and benefits vary with experience and employment location but are competitive with other health specialties. See Section IV, Table 5 of this *Directory* for more information, or www.ama-assn.org/go/hpsalary.



Educational Programs

Length. Program length varies, depending on program design, objectives, and the degree or certificate awarded.

Curriculum. Most programs require prerequisite work in radiation therapy or radiation physics. The curriculum of an accredited program includes an extensive component of technical and professional courses, including an emphasis on structured, competency-based clinical education. Interested individuals should contact a particular program for information on specific courses and prerequisites.

Radiation Therapist

Radiation therapists deliver prescribed doses of radiation to patients for therapeutic purposes. In fulfilling this primary responsibility, radiation therapists provide appropriate patient care; apply problem-solving and critical thinking skills in the administration of treatment protocols, tumor localization, and dosimetry; and maintain appropriate patient records. Radiation therapists are particularly concerned with the principles of radiation protection for patients, themselves, and others.



Career Description

Radiation therapists apply knowledge of anatomy and physiology, oncologic pathology, radiation biology, radiation oncology techniques, treatment planning procedures, and dosimetry in the performance of their duties. They must also communicate effectively with patients, health professionals, and the public.

The radiation therapist accepts responsibility for administering a radiation oncologist (physician)-prescribed course of radiation therapy, providing patient care during treatment, and maintaining treatment records. Radiation therapists also evaluate and assess treatment delivery components, evaluate and assess the daily phys-

iologic and psychologic responsiveness of patients, and ensure quality care for patients undergoing radiation therapy. Additional duties may include tumor localization, dosimetry, patient follow-up, and patient education. Radiation therapists must display competence and compassion in meeting the special needs of the oncology patient.



Employment Characteristics

Radiation therapists are employed in health care facilities, including hospitals, cancer centers and private offices; they are also employed in settings where their responsibilities focus on education, management, research, and sales.



Salary

In 2004, radiation therapist salary averaged \$72,300. Salaries and benefits vary with experience and employment location. Some states require licensure as a condition of practice. Refer to Section IV, Table 5 of this Directory for more information, or see www.ama-assn.org/go/hpsalary.



Educational Programs

Length. Programs may be 1, 2, or 4 years, depending on program design, objectives, and the degree or certificate awarded.

Curriculum. The curriculum of an accredited program includes an extensive component of technical and professional courses, including an emphasis on structured, competency-based clinical education. Interested individuals should contact a particular program for information on specific courses and prerequisites.

Radiographer

Radiographers use radiation equipment to produce images of the tissues, organs, bones, and vessels of the body, as prescribed by physicians, to assist in the diagnosis of disease or injury. Radiographers continually strive to provide quality patient care and are particularly concerned with limiting radiation exposure to patients, themselves, and others. Radiographers use problem-solving and critical-thinking skills to perform medical imaging procedures by adapting variable technical parameters of the procedure to the condition of the patient.



Career Description

Radiographers apply knowledge of anatomy, physiology, positioning, radiographic technique, and radiation biology and protection in the performance of their responsibilities. They must be able to communicate effectively with patients, other health professionals, and the public. Additional duties may include evaluating radiologic equipment, conducting a radiographic quality assurance program, providing patient education, and managing a medical imaging department. The radiographer must display competence and compassion in meeting the special needs of the patient.



Employment Characteristics

Radiographers are employed in health care facilities—including hospitals, specialized imaging centers, urgent care clinics, and private physician offices—and as educators or imaging department administrators. Thirty-five states require licensure as a condition of practice.



Salary

In 2004, radiographer salary averaged \$59,735. Salaries and benefits vary according to experience and employment location. Refer to Section IV, Table 5 of this

Directory for more information, or see www.ama-assn.org/go/hpsalary.



Educational Programs

Length. Programs are generally 2 to 4 years, depending on program design, objectives, and the degree or certificate awarded.

Curriculum. The curriculum of an accredited program includes an extensive component of technical and professional courses, including an emphasis on structured competency-based clinical education. Contact a particular program for information on specific courses and prerequisites.

Post Primary Specialties in Radiologic Technology

Practitioners of the following post primary specialties in radiologic technology are eligible for certification by the American Registry of Radiologic Technologists. Candidates for certification must be certified in radiography, radiation therapy, or nuclear medicine and document specific clinical competencies to be eligible for the certification examination.

- Bone Densitometry
- Breast Sonography
- Cardiac-Interventional Radiography
- Computed Tomography
- Magnetic Resonance Imaging
- Mammography
- Quality Management
- Vascular Sonography
- Vascular-interventional Radiography



Inquiries

Careers/Curriculum

American Society of Radiologic Technologists
15000 Central Avenue SE
Albuquerque, NM 87123
505 298-4500
www.asrt.org

American Association of Medical Dosimetrists
c/o Credentialing Services
One Physics Ellipse
College Park, MD 20740
301 209-3320 301 209-3343 Fax
E-mail: aamd@aapm.org
www.medicaldosimetry.org

Certification/Registration

American Registry of Radiologic Technologists
1255 Northland Drive
Mendota Heights, MN 55120
651 687-0048

Radiologic Technology

Program Accreditation

Joint Review Committee on Education in Radiologic Technology

20 N Wacker Drive, Suite 2850

Chicago, IL 60606-3182

312 704-5300 312 704-5304 Fax

E-mail: mail@jrcert.org

www.jrcert.org