

RADIATION THERAPY SKILLS

- Act as liaison with physician and supportive care personnel
- Administer prescribed doses of radiation to specific body parts, using radiation therapy equipment according to established practices and standards
- Assist in the preparation of sealed radioactive materials, such as cobalt, radium, cesium and isotopes, for use in radiation treatments
- Assist other health-care personnel during dosimetry procedures and tumor localization
- Calculate actual treatment dosages delivered during each session
- Check for side effects such as skin irritation, nausea and hair loss to assess patients' reaction to treatment
- Check radiation therapy equipment to ensure proper operation
- Conduct treatment sessions in accordance with the long-term treatment plan and under the general direction of the patient's physician
- Educate, prepare and reassure patients and their families by answering questions, providing physical assistance, and reinforcing physicians' advice regarding treatment reactions and post-treatment care
- Enter data into computer and set controls to operate and adjust equipment and regulate dosage
- Follow principles of radiation protection for patient, self, and others
- Help physicians, radiation oncologists and clinical physicists to prepare physical and technical aspects of radiation treatment plans, using information about patient condition and anatomy
- Implement appropriate follow-up care plans
- Maintain records, reports and files, such as radiation dosages, equipment settings and patients' reactions
- Observe and reassure patients during treatment and report unusual reactions to physician or turn equipment off if unexpected adverse reactions occur
- Photograph treated area of patient and process film
- Position patients for treatment with accuracy according to prescription
- Prepare and construct equipment, such as immobilization, treatment, and protection devices
- Provide radiation therapy to patients as prescribed by a radiologist according to established practices and standards
- Review prescription, diagnosis, patient chart, and identification
- Store, sterilize, or prepare the special applicators containing the radioactive substance implanted by the physician

RADIATION THERAPY EQUIPMENT

IMRT (Intensity-Modulated Radiation Therapy)

BAT Ultrasound IGRT

Elekta Precise Linear Accelerator, Elekta VR 175 and Elekta Synergy

Nucletron HDR

Phillips Big Bore CT Simulator

Siemens Lexar (Precision Package)

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Siemens Orthovoltage

Siemens Primus

Siemens Somatron CT

Toshiba CT Simulator

Varian 2100EX

Varian 23EX

Varian Acuity

Varian On-Board Imaging IGRT

Varian Trilogy

RADIATION THERAPY TREATMENT MODALITIES

Acculoc

BAT System

CBCT

ExacTrac

Gold Seed Mapping

Portal Imaging

Respiratory Gating

SBRT

Stereotactic Radiosurgery

MOSAIQ, ADAC Pinnacle, Meditech and Therapan Treatment Planning

RADIATION THERAPY CERTIFICATIONS & MEMBERSHIPS

- American Society of Radiologic Technologists (ASRT)
- American Society for Radiation Oncology (ASTRO)
- Ohio Society of Radiologic Technologists (OSRT)

Radiation Therapist Code of Ethics

- 1) The radiation therapist advances the principal objective of the profession to provide services to humanity with full respect for the dignity of mankind.
- 2) The radiation therapist delivers patient care and service unrestricted by concerns of personal attributes or the nature of the disease or illness, and without discrimination on the basis of sex, race, creed, religion or socioeconomic status.
- 3) The radiation therapist assesses situations; exercises care, discretion and judgment; assumes responsibility for professional decisions and acts in the best interest of the patient.
- 4) The radiation therapist adheres to the tenets and domains of the scope of practice for radiation therapists.
- 5) The radiation therapist actively engages in lifelong learning to maintain, improve and enhance professional competence and knowledge.

SKILL REQUIREMENTS

Operation Monitoring -- Watching gauges, dials, or other indicators to make sure a machine is working properly.

Time Management -- Managing one's own time and the time of others.

Operation and Control -- Controlling operations of equipment or systems.

Active Listening -- Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Speaking -- Talking to others to convey information effectively.

Instructing -- Teaching others how to do something.

Critical Thinking -- Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Service Orientation -- Actively looking for ways to help people.

Social Perceptiveness -- Being aware of others' reactions and understanding why they react as they do.

Reading Comprehension -- Understanding written sentences and paragraphs in work related documents.

ABILITY REQUIREMENTS

Problem Sensitivity -- The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

Near Vision -- The ability to see details at close range (within a few feet of the observer).

Oral Comprehension -- The ability to listen to and understand information and ideas presented through spoken words and sentences.

Written Comprehension -- The ability to read and understand information and ideas presented in writing.

Speech Clarity -- The ability to speak clearly so others can understand you.

Oral Expression -- The ability to communicate information and ideas in speaking so others will understand.

Deductive Reasoning -- The ability to apply general rules to specific problems to produce answers that make sense.

Inductive Reasoning -- The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

Information Ordering -- The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

Written Expression -- The ability to communicate information and ideas in writing so others will understand.

JOB ACITIVITES

Monitor Processes, Materials, or Surroundings -- Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.

Processing Information -- Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.

Documenting/Recording Information -- Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.

Interacting With Computers -- Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.

Updating and Using Relevant Knowledge -- Keeping up-to-date technically and applying new knowledge to your job.

Getting Information -- Observing, receiving, and otherwise obtaining information from all relevant sources.

Assisting and Caring for Others -- Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.

Inspecting Equipment, Structures, or Material -- Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.

Communicating with Supervisors, Peers, or Subordinates -- Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.

Evaluating Information to Determine Compliance with Standards -- Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.