

**Job Class Profile:            Radiation Therapist II****Pay Level:                            LX-30                            Point Band:                            787-821**

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	5	4	4	6	4	5	5	3	6	
Points	233	67	25	29	120	108	103	64	64	813

**JOB SUMMARY**

The Radiation Therapist II performs lead direction over lower level therapists performing various radiological diagnostic and therapeutic simulation procedures in the use of radiation to detect and treat cancerous tumors under the prescribed treatment plan of a radiation oncologist. Work involves facilitating the routine and performing other related procedures, interpreting treatment plans, checking dosages and calculations of therapists and patients individual treatment dosages, performing daily checks of equipment, maintaining and controlling patient appointments, and providing orientation and training to new technical staff.

**Key and Periodic Activities**

- Participates in performing computed tomography (CT) simulation of patients for radiation treatment; assists oncologist in localizing tumour volume and provides radiographic documentation through CT scan, digitally reconstructed radiographs or electronic portal images of treatment ports; prepares contrast media for injection; prepares patient for simulation procedure; creates stable, reproducible patient position through the use of immobilization devices such as aquaplast mask, shoulder stabilization, belly board, carbon fiber breast board, etc.; and documents all treatment parameters, and sets up instructions.
- Performs quality assurance (QA) checks to monitor and evaluate procedures and equipment. These involve documenting the checking process and reporting any deviation from normal; monitoring and documenting equipment functions; performing checks on patients' charts; and documenting treatment portals, and ensuring doctor approves same.
- Organizes the unit's workload through maintenance of the appointment system; ensures calculations, treatment plans, immobilization and positioning devices are finalized prior to treatment; and assists staff in resolving technical problems.
- Administers radiation treatments as per radiation oncologist's prescription.
- Explains to patients' radiation simulation and treatment procedures; side effects; and suggests a course of action to alleviate symptoms and resources available.
- Liaises with other health care professionals including social workers, nurses, physicians, dietitians regarding patients overall care during radiation treatments.
- Participates in committees and staff meetings.
- Performs and/or checks calculations of lower level therapists and interprets treatment plans.
- Provides emergency radiation treatment when on call.

### Key and Periodic Activities

- Orientates new staff.
- Develops departmental policies and procedures, specifically those involved in the operation of the CT simulator.

## SKILL

### Knowledge

#### General and Specific Knowledge:

- Specialized clinical knowledge in radiation therapy procedures and techniques
- Knowledge of treatment planning and calculation software.
- Technical and complex equipment/machines
- Human anatomy and physiology
- Radiation and Workplace Health and Safety
- Quality assurance practices and guidelines including occurrence reporting.

#### Formal Education and/or Certification(s):

- Minimum: Undergraduate Degree or Diploma in Radiation Therapy and certification from the Canadian Association of Medical Radiation Technologists (CAMRT) in Medical Radiation Technology, MRT(T), and registration as a Registered Radiation Therapist (RTT).
- BLS (Basic Life Support) certification

#### Years of Experience:

- Minimum: 3 - 4 years

#### Competencies:

- Computer skills
- Maintenance and calibration of radiation and processing equipment
- Oral and written skills
- Team leadership and development

### Interpersonal Skills

- A range of interpersonal skills are used to listen, ask questions, gather and provide information, to explain routine and communicate complex information and procedures to patients, students, and healthcare providers; provide expert advice and guidance to therapists and students; gain the cooperation of employees to complete work; provide care/comfort/nurturing to patients; and to instruct, teach or train staff and students. Occasionally, may make formal presentations; facilitate or moderate meetings; and deal with angry or upset people.
- Communications occur with employees within the immediate work area, department and with outside agencies including physicians (oncologist), manager, students, suppliers and contractors, sales representatives, government representatives, external executives, professional associations and patients and family members.
- The most significant contacts are with patients and family members, physicians (i.e. oncologist), other therapists and health professionals as well as the manager.

## EFFORT

### Physical Effort

- The demands of the job occasionally result in considerable fatigue and require the need for strength and endurance.
- Constantly lifts or moves objects less than 10 lbs (i.e. supplies, linens, charts, etc.), and occasionally objects between 10-50 lbs (i.e. supplies, equipment, breast board, immobilization devices, and superficial treatment machines) requiring strength and endurance. Pushes and pulls patients over 50 lbs, in order to position or reposition them in the appropriate place to perform treatments.
- Required to regularly stand, walk, or sit for extended periods when performing procedures/treatments, or reviewing data on monitors.
- Fine finger or precision work is regularly required to work various controls on machines requiring very controlled movements. Also uses hand tools that require accurate control and steadiness. Gross motor skills are also regularly required to reposition patients.

### Concentration

- **Visual concentration** is constantly required to match patients skin tattoos to the intersection of laser lines, to observe patients via closed circuit camera for movements which could result in incorrect simulation or treatment and require immediate termination of treatment, and to check digitally reconstructed radiographs with CT scan results and electronic portal images to confirm accurate position of radiation treatment beams.
- **Auditory concentration** is required constantly during patients' treatment to listen for signs of patients stress via intercom, and to communicate with other staff regarding patients' treatments.
- Other sensory demands such as **touch** are used when setting up treatments to reposition patients.
- The tasks that are **repetitive and require alertness** is treating numerous patients per day with specific treatment plans. A **higher level of alertness and attentiveness** is required when giving radiation treatments to ensure radiation being delivered is to the right patient and it is correct and accurate.
- **Does not have control over their work pace** when there are emergencies, when patient treatments are complicated by their condition, or they are nervous requiring a sedative, delays caused by physicians' schedules, equipment malfunctions, and when there are reduced staffing levels.
- Therapists are subject to **time pressures and deadlines** due to the complication of the treatments, which may exceed the scheduled appointment time. Other **time pressures** occur when there are emergencies and urgent patients that have to be scheduled. **Interruptions** occur from patients, family members, other therapists, or health professionals requesting information.
- **Eye/hand coordination** are required to operate and maintain equipment, to mark patients body with ink marks for treatment preparation.
- **Exact results and precision** are required to match patients' internal anatomy and markings (tattoos) within 5 mm or less to those taken in the simulator with the recordings and markings in the live treatment sessions. Some treatments require even closer results of between 3-4 mms. **Exact results and precision** are also required when doing calculations, and treatment set-ups (i.e. markings must align with the treatment room lasers). Radiation treatments once

given cannot be corrected, but do have the potential to harm a patient.

### **Complexity**

- The tasks and activities are quite different, but allow the use of similar skills and knowledge.
- Complexity of work tasks vary but are related to the provision of lead direction to lower level therapists performing various radiological diagnostic and therapeutic simulation procedures in the use of radiation to detect and treat cancerous tumors. Work involves facilitating the routine procedures while also performing other related procedures and duties.
- Typical problems occur during treatment. For example, during the live session of the treatment process, patients must be in the exact position they were when their calculations were determined in the simulator. Patients may not be in the same exact position due to a number of reasons including patient conditions, nervousness, etc. When this occurs, the therapist must get the patient to relax and recreate the position the patient was in during simulation.
- When addressing problems and solutions, consults with medical physicist, dosimetrist, other therapists, and radiation oncologist; and by following procedures, policies, and guidelines.

## **RESPONSIBILITY**

### **Accountability and Decision-Making**

- Work tasks are highly monitored and controlled.
- Can make independent decisions related to the staffing assignments such as scheduling breaks and some decisions regarding patient scheduling. Able to make clinical judgments regarding troubleshooting problems with set up variation.
- Organizes the unit's workload through maintenance of the appointment system; performs technical work in facilitating the routine procedures and performing other related procedures; interprets treatment plans and checks dosages and calculations of therapists.
- Decisions that require supervisory approval are related to the purchase of equipment, changes in policies and procedures, and approval for funding to attend conferences or travel.
- Situations where discretion and judgment are used to interpret directions and apply guidelines are in relation to set up of treatments and whether or not to refer a patient for further care from a dietitian, social worker, nurse, or a physician. Other situations where a high degree of independent discretion and judgment are used are related to contacting a physician for treatment related issues or changes, and discretion used in making changes in treatments based on target volumes, and other factors. Within predetermined limits and procedures, has some discretion related to the daily treatment set-ups.

### **Impact**

- Work activities impact the immediate work area, the department, outside the department, patients, and the public.
- The work can negatively or positively have impacts on patients' treatment and well-being as well as overall functioning of the unit's workload including performing quality assurance checks.
- Work activities impact the following resources: equipment (i.e. radiation machines), processes and systems (i.e. policies, procedures and practices), information, material resources (i.e. supplies used), corporate image, and the health and safety of patients.
- Examples of types of errors are failure to provide patient with proper safety shield during

exposure to radiation (i.e. attenuator). This could result in a higher dose of radiation. Other errors could involve treating the wrong area of the patients' body or the wrong patient.

- These errors are mitigated as the work tasks are highly monitored and controlled. Therapists work in teams with each person checking the work of another. There is quality assurance checks done on treatment plans, calculations, and machines consistently, and errors are generally detected immediately.

#### **Development and Leadership of Others**

- Not responsible for the supervision of staff.
- Provides development and leadership responsibilities such as on-the-job advice/guidance, and orientation to new staff. Works in a training center for radiation therapists and thus, provides students with feedback on their performance, on the job training, and acts as a technical mentor.
- Performs team lead activities such as orientation to new staff, feedback on performance activities, builds morale and employee relations, organizes, coordinates, checks the work, and delegates tasks to staff. Also provides technical advice, guidance, and troubleshoots any patient or treatment issues.
- Does not perform project lead activities.

## **WORKING CONDITIONS**

#### **Environmental Working Conditions**

- Required to take special precautions or use safety equipment when performing treatments such as wearing radiation monitoring devices and to practice safety precautions and techniques.
- There is a moderate likelihood of receiving minor cuts, bruises or minor illnesses, fractures, injury or occupational illness resulting in a partial disability. There is no likelihood of receiving a total disability, if all safety precautions are followed.
- Constantly exposed to radiation, glare from monitors/screens, dirt/dust, unusual/distracting noise, and lack of privacy. Regularly, has limited lighting due to the treatments being performed, bodily fluids and waste, infectious diseases, odours, hazardous chemicals, sharp objects, and works with heavy machinery.