



## **IDENTIFICATION**

<b>Department</b>	<b>Position Title</b>	
Northwest Territories Health and Social Services Authority	Mammography/Medical Radiation Technologist	
<b>Position Number</b>	<b>Community</b>	<b>Division/Region</b>
48-11383	Yellowknife	Territorial Operations/ Clinical Integration/ Laboratory & Diagnostic Imaging

## **PURPOSE OF THE POSITION**

The Mammography/Medical Radiation Technologist (MMRT) provides both mammography and diagnostic X-ray services to patients of the Diagnostic Imaging (DI) Department and Breast Screening Program in accordance with established standards of radiological practice and the philosophy and objectives of the Northwest Territories Health and Social Services Authority (NTHSSA) to ensure quality images are produced which enable the Radiologist in the accurate and timely diagnosis of patients.

## **SCOPE**

The Northwest Territories Health and Social Services Authority (NTHSSA) is the single provider of all health and social services in the Northwest Territories (NWT), except in the Hay River and Tłı̄cho regions. It covers 1.2 million square kilometres and serves approximately 45,000 people, including First Nations, Inuit, Métis, and non-indigenous persons. Health and social services include the full range of primary, secondary, and tertiary health services, as well as social services, including family services, protection services, care placements, mental health, addictions, and developmental activities, delivered by more than 1,400 health and social services staff.

Under the direction of the Minister of Health and Social Services, the NTHSSA was established to advance a single integrated delivery system as part of the Government of the Northwest Territories (GNWT) transformation strategy. The NTHSSA sets clinical standards, procedures, guidelines, and monitoring for the entire Northwest Territories. While the Tłı̄cho Community Services Agency (TCSA) operates under a separate board, and Hay River Health and Social Services Agency (HRHSSA) remains separate in the interim, Service Agreements will be established with these boards to identify performance requirements and ensure adherence to



clinical standards, procedures, guidelines, and policies as established by the NTHSSA.

Since 2013, the NWT health and social services system has been engaged in a strategic renewal process. This began with System Transformation, a multi-year, community engagement-driven process to develop a model for an integrated health and social services system. The resulting changes to the system's governance structure have enabled a one-system approach, improving efficiency and integration while better respecting the unique contexts and strengths of the NWT's regions and cultures.

Building on the results and momentum of System Transformation, the strategic renewal effort has begun a Primary Health Care Reform to shift the system and its care models toward a team-based model. Relationship-based approach that is driven through public participation, community feedback, and data, and built upon a foundation of trust and cultural safety. Using a community development approach, we are changing the way we work with people and communities, at every level of the health and social services system, to enable public participation in priority setting, planning, and design that integrates the social determinants of health.

Cultural safety is an outcome where Indigenous peoples feel safe and respected, free of racism and discrimination, when accessing health and social services. Relationship-based care is fundamental to cultural safety because it prioritizes trusting, caring, and ongoing relationships between patients and clients and their providers. Embedding a culturally safe approach in Health and Social Services is critical to supporting equitable access to care and to improving long-term health outcomes for Indigenous peoples.

The incumbent is expected to model, honour, and promote a culturally safe environment at all times, working from an anti-racist, trauma-informed perspective and employing self-reflection to encourage the professional growth and whole-person development of self and others. Indigenous worldviews, practices, and customs must also be respected.

STH is an accredited facility, located in Yellowknife, Northwest Territories (NWT). STH is the referral center for approximately 43,000 NWT residents and 5,900 residents from the Kitikmeot Region of Nunavut. STH provides health care services to adults and children, on an inpatient/outpatient and outreach basis, to restore health with dignity. STH maintains a tobacco-free environment within the building and throughout the property, recognizing the health hazards associated with tobacco in the workplace, both to smokers and non-smokers alike.

Located at STH in Yellowknife, the MMRT reports directly to the Technical Supervisor, DI, and is part of a small team of Radiological Technologists who perform radiological testing (x-ray) on patients. The incumbent works as part of the DI team, which includes the Technical Supervisor, Radiological Technologists, a Mammography Technologist, Sonographers, and a



## Senior Technologist-Computed Tomography (CT).

The Diagnostic Imaging Department handles approximately 33,000 diagnostic imaging examinations annually (approximately 100 per day). Practitioners refer patients to the Diagnostic Imaging Department. The production of diagnostic images (i.e., X-rays and ultrasounds) is a critical function within STH. Without timely, accurate imaging, the hospital would be unable to provide comprehensive patient diagnosis and treatment.

Most exams will be conducted individually, with the incumbent working directly with the patient and responsible for all images produced. In addition, on a scheduled basis, the incumbent will be required to provide hands-on support and patient care during invasive examinations conducted by a Radiologist. (i.e. preparation for barium enemas, biopsy of lumps in the breasts). During these invasive procedures, the incumbent will be responsible for all aspects of the procedure, including explaining the procedure to the patient, assisting the Radiologist during biopsies, documenting all pertinent information, collecting biopsy specimens, acquiring images, providing post-procedure care as required, and providing patient education. The incumbent will assess the risk of allergies and comorbidities, such as diabetes, before injecting contrast, and be prepared for any potential allergic reactions. Challenges include the patient's unpreparedness, a tight schedule, and language barriers.

The incumbent participates in reviews of patients' results with the Radiologist and determines if further views are required for accurate diagnosis. This is done on a case-by-case basis and during Assessment Reviews (part of the Quality Assurance of the Breast Screening Program).

The incumbent is responsible for ensuring the continued operation of radiographic equipment, including direct radiography (DR), fluoroscopy, C-Arm, and mammography units.

The incumbent provides X-ray services (fluoroscopy) in the Operating Room for surgeons using the C-Arm. In some instances, the portable X-ray machine must be utilized.

Within the Diagnostic Imaging Department, the MMRT will be scheduled for regular mammography. During this time, they are responsible for conducting testing in accordance with the established Quality Control program and breast imaging protocols.

### **RESPONSIBILITIES**

**1. Independently performs mammography and all types of general radiology and procedures in accordance with established policies and procedures of STH and governing bodies, producing high-quality images for diagnosis of the patient by the Radiologist.**

- Demonstrates patient and family-centred care and quality principles in the provision of services to patients and families.



- Ensures the patient is a candidate for the procedure, understands the procedure and explains the risks associated.
- Reviews patient history and questions the patient to obtain relevant information required before performing the examination (i.e. history and symptoms). Obtaining accurate information from the patient is imperative for the incumbent as altered breast anatomy (i.e. implants, mastectomy, radiation treatment and chemotherapy) will alter the delivery of the exam procedure.
- Based on in-depth knowledge of human anatomy and radiographic procedures, makes creative decisions on how to best attain quality images with patients of a variety of sizes and ailments.
- Examines and evaluates images for technical and diagnostic quality.
- Advocates the dignity and self-respect of patients.
- Applies all methods and standards of radiation protection for patients and employees.
- Obtains written consent for invasive procedures from the patient.
- Promotes the autonomy of patients and helps them express their health needs and values to obtain appropriate information and services.
- Safeguards the trust of patients, ensuring appropriate patient privacy and confidentiality, and that information learned in the context of a professional relationship is shared outside the health care team only with the patient's permission or as legally required.
- Provides direct patient care and support during all types of examinations.
- Acts in a manner consistent with their professional responsibilities and standard of practice.
- Acts as a liaison between the patient and the radiologist. The incumbent must be able to relay all significant findings from the examination to the Radiologist to assist them in making an accurate diagnosis
- Processes and evaluates examinations for technical and diagnostic quality. This may include discussions with the Radiologist to outline procedures followed.
- Completes all necessary paperwork, packages and issues biological samples (i.e. breast lump biopsy) to appropriate testing facilities
- Applies all methods and standards of radiation protection for the patient and the incumbent.
- Acquires current patient data to maintain the screening mammography database used for patient recall and statistical information as required by the Department of Health and Social Services (DHSS NWT Breast Health Advisory Committee and Public Health Agency of Canada).
- Conducts administrative tasks or any other tasks, as required by the employer, related to the department and that would promote the vision, mission and values of STH and the NTHSSA.



- 2. Independently performs basic quality control tests in accordance with Safety Code 35 (Radiological Equipment) and Safety Code 33 (Mammography Equipment) from the Radiation Protection Bureau of Health Canada and by the NTHSSA Policies and Procedures to maintain image quality and to ensure a safe environment for patients and health professionals.**
  - Daily monitoring of equipment and conducting quality control (QC) tests on mammography equipment, including but not limited to phantom images, repeat analysis test, compression test, visual inspection, and monitor evaluation. Document QC results in appropriate logbooks.
  - Troubleshoot as indicated by QC results.
  - Identifies problems or concerns, notifies the Technical Supervisor, and consults with field service engineers.
  - Completes minor maintenance on machines as required.
  - Double-check the accuracy of information or one's own work (i.e. ensure the accuracy of figures and other data).
  - Participates and engages in quality improvement initiatives.
  
- 3. Maintain the Mammography Accreditation Program (MAP) with the Canadian Association of Radiologists (CAR).**
  - Participates in the accreditation process by performing the required testing for MAP.
  - The incumbent must work closely with the Breast Screening Program Coordinator
  - Completes a minimum of 15 credit hours of continuing education every three years for MAP.

## **WORKING CONDITIONS**

### **Physical Demands**

Most of the incumbent's time is spent supporting patients and moving and adjusting equipment, including overhead x-ray equipment, C-Arm, and portable x-ray machines. These activities result in physical fatigue and stress. Potential problems included lower back problems and repetitive strain injuries (e.g. shoulder, wrists). Standing and operating the C-Arm during surgery in the Operating Room (for more than one hour) is physically fatiguing.

### **Environmental Conditions**

Although routine practices are in place, the incumbent is continually exposed to low doses of ionizing radiation during X-ray examinations. Quarterly monitoring is conducted to ensure the incumbent's radiation exposure remains within limits. Investigations will be conducted for each known or suspected case of excessive or abnormal exposure to determine the cause and take remedial steps to prevent recurrence. The incumbent is required to work with ill, emotionally upset patients, patients with contagious diseases (TB, HIV, and Hepatitis), and/or open wounds



(Emergency, Operating Room) and is at risk of being exposed to blood, body fluids and excrements (use of rectal contrast).

### **Sensory Demands**

The incumbent will be required to use the combined senses of touch, sight, and hearing during ongoing assessments (e.g., initiating IVs, preparing for barium enemas) and continuous observation during testing.

During a breast biopsy of a suspicious area, the incumbent must triangulate microscopic lumps using multi-angle images. After the technologist identifies the exact target, the Radiologist will insert a biopsy needle and obtain a sample from the area. The incumbent must correctly identify areas of concern. This requires extreme concentration and the use of touch and sight.

The incumbent will be required to palpate (identify external landmarks) patients to focus on targets for radiographic examination. This can be challenging due to the variety of patient sizes and shapes. The incumbent must be aware of the patient's sense of security during invasive procedures. The Technologist may need to have another person present (e.g., a male technologist inserting rectal tubes into female patients).

### **Mental Demands**

Patients coming into the Diagnostic Imaging Department are often very ill or have experienced a severe trauma. The core reason for any mammogram, screening or diagnostic is to rule out cancer of the breast. As such, the incumbent may be exposed to death/dying or other emotionally disturbing experiences and deal with a wide variety of emotional behaviours. The incumbent is expected to remain calm, controlled, and professional in all situations and to demonstrate compassionate care to the client. Dealing with this anxiety can cause high levels of mental stress on the incumbent.

There is pressure to produce optimal images within a set timeframe. This is hampered by: physical size and age of the patient, lack of adequate patient preparation, patients being in pain and/or shock, patients intoxicated and uncooperative, patients arriving late for appointments and many patients with language barriers.

### **KNOWLEDGE, SKILLS AND ABILITIES**

- Knowledge of Radiology and an ability to effectively use varied types of diagnostic equipment required to produce quality images for diagnosis of the patient by the Radiologist.
- Knowledge of Mammography, including all special view positioning, and the ability to produce quality mammograms for the screening and diagnosis of breast pathology.
- Knowledge of human anatomy to effectively conduct radiographic examinations and



identify pathology (i.e. to determine if the image produced meets the diagnostic requirement of the Radiologist).

- An ability to produce high-quality X-rays and an ability to provide technical direction to others as required.
- An understanding of standard quality control processes to perform Quality Control testing as required by Safety Code 35 (Radiological Equipment).
- A working knowledge of and an ability to efficiently operate a Radiology Information System (RIS) and Picture Archiving Communication System (PACS).
- An ability to communicate effectively with both medical and non-medical individuals.
- Ability to commit to actively upholding and consistently practicing personal diversity, inclusion and cultural awareness, as well as safety and sensitivity approaches in the workplace.

**Typically, the above qualifications would be attained by:**

This level of knowledge is typically acquired through the successful completion of a Diploma program in Medical Radiation Technology, one year of experience as a General Radiation Technologist, workplace mammography experience and successful completion of Breast Imaging 1 and Breast Imaging 2 courses (Mammography 1 and Mammography 2 before 2019) through CAMRT or successful completion within 1 year of hire.

Equivalent combinations of education and experience will be considered.

**ADDITIONAL REQUIREMENTS**

- Continuing education to stay current with the ever-changing technology.
- Acquire 15 credits in breast imaging at a CAR-MAP-accredited facility every three years.
- Proof of immunization in keeping with current public health practices is required.

Stanton Territorial Hospital has several certifications that are required upon hire, depending on the area where the employee works, including but not limited to: Aboriginal Cultural Awareness, Biohazardous Waste, Biosafety & Biosecurity, Infection Control, Workplace Hazardous Materials Information System (WHMIS), and others directly related to the incumbent's scope of practice.

**Position Security** (check one)

- No criminal records check required
- Position of Trust – criminal records check required
- Highly sensitive position – requires verification of identity and a criminal records check

**French language** (check one if applicable)



- French required (must identify required level below)

Level required for this Designated Position is:

ORAL EXPRESSION AND COMPREHENSION

Basic (B)  Intermediate (I)  Advanced (A)

READING COMPREHENSION:

Basic (B)  Intermediate (I)  Advanced (A)

WRITING SKILLS:

Basic (B)  Intermediate (I)  Advanced (A)

- French preferred

**Indigenous language:** Select language

- Required
- Preferred