



## **PROFESSIONAL BOARD FOR RADIOGRAPHY AND CLINICAL TECHNOLOGY**

### **SCOPE OF PRACTICE: RADIATION THERAPY**

#### **INTRODUCTION:**

This document serves to guide the performance levels, limits and scope of practice for radiation therapist registered with the Health Professions Council of South Africa (HPCSA), as regulated by the Professional Board for Radiography and Clinical Technology (PBRCT – herein after referred to as the Board). This document aims to guide professional, safe and effective radiation therapy practice and to protect members of the public against unsafe and unethical professional conduct.

#### **PURPOSE AND SCOPE OF THE DOCUMENT:**

A scope of practice defines the parameters of practice and identify the boundaries for practice for which a professional has the knowledge, skills and expertise to practice safely and effectively in keeping with the terms of the governing bodies without posing any danger to the public or the practitioner.

The purpose of this document is thus to define the scope of practice to ensure the delivery of safe, high quality radiation treatment services in both public and private health settings. The document, furthermore, describes the role of a Radiation Therapist as a member of the healthcare team and provides a framework for the quality of improvement programs. As legislation and technology are ever evolving this document is dynamic in nature and will be amended when new legislation or technologies are introduced.

#### **QUALIFICATIONS FOR RADIATION THERAPIST:**

Radiation Therapists must be deemed competent in the radiation treatment procedures they perform through obtaining appropriate, accredited education, training and certification in their area of practice from a nationally recognised and accredited credentialing higher education institution. Radiation Therapists may plan radiation treatment and treat patients with radiation after they have obtained a Board approved qualification and have registered such qualification with the HPCSA.

## **PROFESSIONAL DUTIES OF A RADIATION THERAPIST:**

Radiation therapists must demonstrate an understanding of human anatomy, physiology, pathology and medical terminology. In addition, comprehension of oncology, radiobiology, radiation physics, radiation oncology techniques, radiation safety and the psychosocial aspects of cancer are required. They must maintain a high degree of accuracy in positioning and treatment delivery techniques. Radiation Therapists must possess, use and maintain knowledge about radiation protection and safety. They assist the radiation oncologists to localize the treatment area, participate in treatment planning and deliver high doses of ionizing radiation as prescribed by the radiation oncologist.

Radiation Therapists are the primary liaison between patients and other members of the radiation oncology team. They must remain sensitive to the needs of the patient through good communication, patient assessment, patient monitoring and patient care skills. Radiation therapy often involves daily treatments extending over several weeks using highly sophisticated equipment. The treatment requires thorough initial planning as well as constant patient care and monitoring for the duration of treatment.

Radiation Therapists need to possess critical thinking, problem solving and ethical decision-making skills in order to practice as independent healthcare professionals. They are expected to engage in continuing professional development (CPD) to keep abreast of rapidly advancing technologies and new healthcare practices; as well as to ensure evidence-based practice by upholding their knowledge, insight and technical competence. They serve diverse healthcare needs and work in close collaboration with a wide range of healthcare professionals in a variety of healthcare setting viz. primary, secondary and tertiary levels of care; public and private healthcare settings as well as research centres.

## **SCOPE OF PRACTICE FOR RADIATION THERAPISTS:**

The list of work activities presented in this document are to be read in conjunction with the current *Regulations defining the scope of the profession of radiography*, relating specifically to the radiation therapy category. The scope must also be read in conjunction with the *Ethical Rules of Conduct* and *Annexure 10* of these Rules as well as all relevant Board policies and guidelines. Annexure 10 provides a framework of professional and ethical practice standards for all radiographers. The activities below are practiced provided they fall within the Board approved education, training and competence of the Radiation Therapists. Radiation Therapists must only practice within the category of radiography for which they are registered with HPCSA. Their practice is subject to having the requisite education, clinical competence and experience to perform such treatment procedures and techniques.

**NOTE: The current scope of profession is under review and is currently awaiting approval and promulgation by the National Minister of Health. The proposed review includes areas for role extension for radiation therapists.**

The scope of practice for the Radiation Therapists includes:

**a. Tumour localization imaging –**

- Producing and recording of images of anatomical regions and physiological functions by means of radiation media for the purpose of tumour localization and verification of planned Radiation Therapy treatment, at the request of the Radiation Oncologist.

**b. Dosimetric treatment planning**

- Collaboration with the Radiation Oncologist and Medical Physicist or Radiation Physicist to delineate the tumour volumes and plan the appropriate external beam Radiation therapy or Brachytherapy, as prescribed by the Radiation Oncologist.

**c. Construction of immobilisation and other accessories related to the patient's planned Radiation Therapy procedures**

**d. Administration of treatment**

- Recording the imaging identification and patient documentation accurately and observing protocols to ensure compliance with the patients' rights to privacy and confidentiality.
- Monitoring, under the direction of a Radiation Oncologist, doses to normal tissues within the irradiated volume to ensure tolerance levels are not exceeded.
- Ensuring that the treatment has been approved and signed by the Radiation Oncologist and planning Radiation Therapist before commencing the course of treatment of the patient.
- Ensuring the accuracy of treatment set-ups through image verification of the treatment area and in-vivo dosimetric procedures.
- Delivering radiation therapy treatments as prescribed by a radiation oncologist and according to the radiation treatment plan.
- Thermoluminescent Dosimeter (TLDs) to check the delivered treatment dose if it is according to the prescribed dose.
- Recording the daily treatment, verification of the treatment area to ensure correct patient set-up.

**e. Care of patients**

- Collaborate with the Radiation Oncologist to ensure optimum patient care and psychosocial support during all procedures associated with the

practice of Radiation Therapy, including tumour localization, treatment planning, treatment delivery and construction of Radiation Therapy accessories; and

- Advising and instructing patients regarding skin care, diet, and general health for the duration of radiation treatment and up to two weeks post treatment.

**f. Therapeutic Radioactive isotopes**

- Collaboration with the Medical Physicist or Radiation Physicists on the storage, handling, and administration of therapeutic radioactive isotopes (sealed) as prescribed by the Radiation Oncologist.
- Participating in brachytherapy procedures and administering some brachytherapy procedures.

**g. Radiation protection** - the application of radiation protection measures and techniques to minimise radiation exposure to patients, staff, self, and general public in accordance with rules, regulations, and recommendations of the Radiation Control Directorate of the National Department of Health in South Africa.

**h. Approval of portal verification**- imaging subject to rule 21 of the ethical rules of conduct.

- Compares pretreatment and portal images to simulation images using anatomical landmarks or fiducial markers.

**i. On treatment review**

- Monitoring patients during Radiation Therapy and referring the patient to the Radiation Oncologist with regard to drugs and medication to counteract radiation side effects where necessary.
- Detecting and reporting significant changes in patients' conditions and determining when to withhold treatment until the oncologist is consulted.

**j. Research and Innovation**- The Radiation Therapists participates in the acquisition and dissemination of knowledge and the advancement of the profession.

- Reads and evaluates research relevant to the profession.
- Participates in data collection.
- Investigates innovative methods for application in practice.
- Shares information with colleagues through publication, presentation and collaboration.
- Adopts new best practices.
- Pursues lifelong learning.

**Document compiled by:**

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