

Quick Guides to the Health Professions

Radiation Therapists

What is a radiation therapist?

Radiation therapists are part of the oncology team that treats patients with cancer. Radiation therapy uses special equipment to administer high doses of radiation to a specific location, aiming to damage the DNA of cancer cells while minimizing harm to nearby healthy cells.

The practice of radiation therapy is interdisciplinary and collaborative, involving a variety of health care professionals, research scientists, clinical practice leaders, and provincial and national health systems.

What do radiation therapists do?

Radiation therapists plan, calculate, deliver, and verify therapeutic doses of ionizing radiation as prescribed by a radiation oncologist using highly sophisticated technology. They are responsible for managing the patient's wellbeing throughout the treatment duration, assessing side effects, and providing education and support as needed.

Where do radiation therapists work?

Radiation therapists primarily work in hospitals, outpatient centers, and cancer clinics.

Education and preparation

Radiation therapy students complete a 4-year BScRT program with three distinct elements.

1. Pre-professional: specific courses that prepare students for the scientific and clinical nature of the program.

2. Didactic: courses covering topics such as cancer and radiation biology; medical physics; the interactions of radiation with tissue and radiation safety and protection; care of oncology patients; gross, relational, and cross sectional anatomy; treatment planning and dosimetry; and principles of imaging and pathology as related to radiation therapy.
3. Clinical: simulation and on-site learning with patients in the clinical cancer care environment.

Licensure

In Alberta, practicing Radiation Therapists must be certified by the Canadian Association of Medical Radiation Technologists (CAMRT) and be licensed by the Alberta College of Medical Diagnostic and Therapeutic Technologists (ACMDTT).

Professional organizations

Alberta College of Medical Diagnostic and Therapeutic Technologists (ACMDTT)
<http://acmdtt.com>

Canadian Association of Medical Radiation Technologists (CAMRT)
<http://www.camrt.ca>

Contributors to this guide

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