

BACKGROUND

Behind Each Cancer Patient: The Full Inter-Disciplinary Radiation Therapy Team

In Canada, up to 15 unique specialists and staff are involved in each cancer patient's radiation therapy treatment program.

Radiation therapy (RT) patients will be reassured to know that there is a dedicated team of professionals, many whom the patient never meets, who are devoted to planning and managing each patient's unique treatment program to minimize any damage to surrounding healthy tissue while killing the cancer cells.

Radiation Oncologists are cancer doctors who are experts in radiation therapy and make the decision about radiation treatment. The radiation oncologist is responsible for managing the cancer care of individual patients and works in a team with other health professionals. A patient will likely visit the radiation oncologist before their treatment begins and once a week while receiving treatment. These talented physicians take an additional five years of training in the RT field after completing their medical degrees.

Radiation Therapists are trained in planning and giving radiation therapy and providing patient care. They will be present during the planning of RT and patients will see them every day of the treatment. They will help patients with problems they may have with side effects, and can answer questions patients or their families may have about radiation therapy.

Oncology Nurses are trained in caring for patients with cancer. These nurses work with other health professionals to help patients and their families manage any changes experienced because of cancer and its treatment including assistance with physical care and managing side effects.

Medical Physicists are scientists who are experts in the planning of radiation treatment. Their primary role is to assure that the highest level of quality care is maintained. The medical physicist is frequently consulted by the radiation oncologist to help design a treatment that is difficult or unusual. He or she is responsible for doing the quality assurance of every treatment plan before it begins. They are also responsible for the radiation machines and computers used to plan and give radiation therapy. Patients may not meet these professionals or the specialized technical staff who assist them, but they are working to target the cancer cells with minute attention to detail, and to keep the machines working perfectly.

Dosimetrists are in the medical physics field. They specialize in developing patient treatment plans. A patient will have three-dimensional pictures taken of their anatomy, using technologies such as computer tomography (CT). These images are highlighted within a computer system, which allows for the definition of the cancer or gross tumour volume, and the critical structures surrounding the tumour that must be limited in their

exposure to radiation. This information goes to the radiation oncologist for the prescription of the treatment program. The dosimetrist then performs calculations to verify accuracy and will have a medical physicist review the plan.

Dentist and Dental Aides help prepare patients for radiation treatment to the head and neck areas.

Nutritionists (or Registered Dietitians) are trained in the dietary needs of cancer patients. They can help make patients more comfortable if they have symptoms such as constipation, diarrhea, nausea, loss of appetite, weight gain or loss, difficulty swallowing, sore throat or sore mouth. They can also answer questions about diet during treatment.

Patient & Family Counseling Counselors are trained to deal with the emotional needs of patients and their families. If patients are having difficulties with stress, anxiety, work, finances, multi-cultural issues, travel or relationships, they should ask their doctor, radiation therapist, or nurse to refer them to a counselor in their centre.

Pharmacists are trained to give advice and information about any medications that may be required to be taken while receiving radiation therapy. A pharmacist in the cancer centre can answer questions from patients or their families about medication.

Laboratory Teams are made up of well-trained laboratory assistants, technologists and pathologists whose primary focus is to help the patient to manage their cancer. The laboratory is where the primary diagnosis is made. The team conducts regular blood analyses to insure the treatment is not causing any undue harm. They also conduct the genetic tests that influence many of today's personalized treatments. The patient will only meet a few of these professionals, but can rest assured that the others are working behind the scenes to give the best possible care.

Radiation Therapy Clerks and Medical Secretaries are critical to managing and tracking the flow of work and contact with the patient in managing appointments, providing information, and keeping important files.

Fellows are involved in patient care. They are post-MD degrees, and post specialized training. **Students** are often present as part of their early training.

References:

1. **Canadian Association of Radiation Oncology (CARO) – members of the board:** Dr. Matthew Parliament, president, CARO; Dr. Michael Milosevic, immediate past president, CARO; Dr. Eric Vigneault, chair, CARO annual scientific meeting; Dr. Ida Ackerman, president of the Canadian Radiation Oncology Foundation (CROF).

2. **BC Cancer Agency**, Patient Booklet, '*Radiation Therapy – What to Expect*'. This booklet is available at:
<http://www.bccancer.bc.ca/PPI/CancerTreatment/RadiationTherapy/default.htm>
3. **Dr. Simon Sutcliffe**, radiation oncologist, past president, BC Cancer Agency, chair, Canadian Partnership Against Cancer (CPAC).
4. **Johns Hopkins**, Department of Radiation Oncology.

About the Canadian Association of Radiation Oncology – Association canadienne de radio-oncologie (CARO-ACRO) (www.caro-acro.ca)

CARO-ACRO is a national organization representing Canadian radiation oncologists, and other professionals in the radiation therapy field, to promote the interests of radiation oncology in Canada, and to represent the specialty to governments, The Royal College of Physicians and Surgeons of Canada and other national and international societies. The mission of CARO-ACRO is to: represent and support its membership nationally and internationally through the promotion of high standards of patient care in the practice of radiation oncology; to support excellence in professional standards; and to promote radiation oncology research and education.

CARO-ACRO is a partner with other disciplines in seeking to improve the outcomes of cancer patients, and provides a consultative authority to oncology related agencies, academic institutions and to the public in all matters pertaining to radiotherapy and oncology in Canada. Currently there are 320 radiation oncologists and 1,190 radiation therapists practicing at 35 centres across the country. CARO-ACRO has a total membership of 687 members from a variety of specialties within the field: radiation oncologists (physicians with specialized training in the care of patients with cancer and the use of radiation treatment), physicists, therapists, radiobiologists, fellows and residents.

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