

## MYTH BUSTER

### RADIATION THERAPY for CANCER TREATMENT & PATIENT CARE

People diagnosed with cancer will often be advised that effective treatment of their particular cancer tumour(s) will require radiation therapy. In fact 50 per cent of cancer patients will benefit from this treatment. For many, this may be the first time they have ever heard of the term, or have had to consider what this treatment recommendation means to their quality of life.

Unfortunately, many myths exist today about radiation therapy that can cause undue stress for cancer patients. This *Radiation Therapy Myth Buster* is intended to explain how it works, and to address the most common patient concerns and questions.

*Prepared by the Canadian Association of Radiation Oncology (CARO-ACRO).*

Myths, Concerns & Questions about Radiation Therapy	The Real Story
<b>What is radiation therapy?</b>	<p>Radiation therapy is the use of targeted X-rays, or electron beams to kill or shrink cancer tumour cells and/or stop them from growing and reproducing. It is used to treat some, but not all cancers.</p> <p>This remarkably safe, effective treatment is also used to relieve cancer patients' pain resulting from the spread of cancer into their bones; to stem bleeding at tumour sites in the body; and to alleviate blockages that interfere with patients' breathing or swallowing.</p>
<b>How is radiation therapy provided to the cancer patient?</b>	<p>There are two main ways of using radiation therapy (also called radiotherapy) to treat cancer:</p> <p>The most common is the external use of high-energy, <b>x-rays</b>, and/or electron beams <b>targeted</b> to a specific area in the body, usually delivered by a large machine while the patient lies on a special bed.</p> <p>Next, there is <b>brachytherapy</b>, which is an internal procedure common for prostate and gynecological cancer patients, which involves the placement of special seeds (radioactive isotopes) into the tumour.</p>
<b>Is radiation therapy combined with other forms of cancer treatment?</b>	<p>Used alone, radiation therapy can cure cancer in many cases. It is also used in combination with other treatments such as surgery, chemotherapy (anti-cancer drug therapy), or hormone therapy.</p>

<b>What is the difference between chemotherapy and radiation?</b>	Chemotherapy is treatment using medicine or drugs given by mouth or intravenously. Radiation is using a machine and x-rays to treat the cancer.
<b>When is radiation therapy the main treatment for cancer?</b>	Radiation therapy is the primary treatment for various skin cancers, cancers of the mouth, nasal cavity, pharynx and larynx, brain tumours, many gynecological cancers, as well as lung and prostate cancers.
<b>When is radiation therapy more likely to be combined with other treatments?</b>	Radiation therapy is used in combination with other treatments and therapies for breast, bowel, gynecologic, lung, testicular, childhood, and bladder cancers, as well as lymphomas like Hodgkins disease and many other cancers.
<b>What does radiation therapy do to the cancer tumour?</b>	In some cases it will eliminate the cancer tumour entirely and cure the cancer, or it will shrink tumour(s) so an operation can be done to remove it, or it will destroy any remaining cancer cells after surgery to prevent the cancer from regrowing.
<b>Is radiation therapy used for reasons other than to cure cancer?</b>	When cure is not possible, radiation therapy can also help improve symptoms such as pain, or extend the patient's length of life, or improve the patient's quality of life.
<b>Is a patient radioactive after treatment?</b>	<p>Patients who receive the external treatment are never radioactive.</p> <p>Patients who receive internal treatments may remain radioactive for a short period of time, but only if seeds have been placed and not removed. If the applicator or seeds are removed then patients are not radioactive. If seeds are kept in place, the radiation level decreases quickly and completely over a few months.</p> <p>The only inconvenience during this period when the radiation is quickly decreasing is that patients need to avoid very close or intimate contact with loved ones, but only for a very short period of time</p>
<b>Is radiation therapy painful?</b>	<p>Most patients feel nothing when the machine is delivering the daily treatment.</p> <p>A few patients report a slight warming or tingling sensation in the area while the radiation machine is on. In some cases, the skin in the area being treated may become dry, sore, or itchy, much like a sunburn. These feelings can be uncomfortable, but usually not enough for a person to stop or interrupt treatment.</p>

<p><b>How often and how long are the treatments?</b></p>	<p>The length of a patient’s appointment for external radiation therapy will vary between 15 minutes and one hour. During that time, the radiation is only directed at the tumour for a few seconds or minutes. You will have appointments each weekday. Many treatment plans are four to six weeks long, but some are shorter. Each case is unique.</p>
<p><b>Will radiation therapy cause a patient to lose all his or her hair?</b></p>	<p>No. Radiation therapy does not cause you to lose all your hair. The only place on your body where you may lose your hair is at the exact spot where the external treatment is aimed.</p>
<p><b>What are the side effects?</b></p>	<p>Because radiation must pass through healthy tissue on its way to the tumour, normal cells can be damaged. That is what causes side effects. In general, <i>the side effects are contained to the area of treatment</i>. Possible side effects of radiation therapy include:</p> <ul style="list-style-type: none"> <li>• Temporary or permanent hair loss in the area being treated</li> <li>• Skin irritation</li> <li>• Temporary change in skin colour</li> <li>• Fatigue</li> <li>• Discomfort in swallowing if radiation is delivered to throat</li> <li>• Diarrhea</li> <li>• Nausea (rare)</li> <li>• Low blood count (rare)</li> </ul> <p>Creams and other medicines can soothe these symptoms. Most radiation side effects are temporary. Healthy cells recover well from radiation therapy.</p>
<p><b>Is there permanent damage to a patient’s body from radiation therapy?</b></p>	<p>Normal, healthy cells are able to recover from radiation damage better than cancer cells and most patients have no long-term side effects from the treatment. Radiation oncologists and the rest of the team are very careful to develop treatment plans that have a high chance of treating the cancer effectively, while at the same time preventing damage to normal parts of the body and the development of side effects.</p>
<p><b>Who is on the radiation therapy team?</b></p>	<p>The team consists of radiation oncologists, radiation therapists and medical physicists who work together to design a radiation therapy treatment plan specific to the individual patient’s needs. A radiation therapist then carries out the treatment plan. Other health care professionals within the cancer centre, such as oncology nurses, nutritionists or registered dieticians, pharmacists, dentists, dental aides and counselors also participate in the patient’s care and treatment as required.</p>
<p><b>How does the patient</b></p>	<p>The effects of radiation add up one on top of each other as the</p>

<p><b>know if the treatment is working?</b></p>	<p>daily treatments go by, and it is difficult to tell how well the therapy is working until after all the treatments are complete. Also, some cancers shrink more quickly than others after radiation therapy and it may take weeks or even months to determine how successful the treatment has been.</p>
<p><b>Are there web sites I can visit to view more information about radiation therapy?</b></p>	<p><b>National Cancer Institute:</b>  <a href="http://www.cancer.gov/cancertopics/radiation-therapy-and-you">http://www.cancer.gov/cancertopics/radiation-therapy-and-you</a>.  <b>BC Cancer Agency:</b>  <a href="http://www.bccancer.bc.ca/PPI/CancerTreatment/RadiationTherapy/default.htm">http://www.bccancer.bc.ca/PPI/CancerTreatment/RadiationTherapy/default.htm</a></p>
<p><b>Who can patients and their families speak to in order to receive more information about radiation therapy treatments?</b></p>	<p>Your radiation oncologist should be your most important source of information about your treatment. Many cancer treatment centres offer fact sheets, brochures and other information for their patients. Plus, they will often have libraries where you may go to get more detailed information. Counselors are often available to help you with your cancer treatment questions and issues.</p>

**For further information about radiation therapy, please contact your local cancer treatment centre.**