

# Using Radiation as a Cancer Treatment

*"My grandfather introduced me to the game, and I've been playing on and off ever since then. I love to play."*- Kim, Patient

When he retired three years ago, Kim Olson was thrilled to have more time for golf and other activities he enjoys.

*"I was going out to eat, going to the theater, going to the movies."*-Kim, Patient

Nothing was getting in the way of his retirement dreams until one morning, Kim noticed something while shaving.

*"I had a lump on my throat– a mass. It was about the size of a small ping pong ball and, frankly, I was hoping that it would go away – but my sense told me it wouldn't."*-Kim, Patient

Kim was right; it *didn't* go away. It was throat cancer. Kim had surgery to remove the tumor—followed by Chemotherapy, plus his primary treatment radiation. Radiation is one of the most common treatments for cancer.

*"Radiation is typically used for a solid tumor. About 60 percent of all cancer patients will need radiation treatment at some point in their treatment course."*- Dr. Vishal Gupta, MD, Radiation Oncologist

Kim's tumor was located toward the back of his tongue – so the radiation was directed at his neck.

*"It felt like, as I was getting it, I was they were shining a light on me and I had no sense that this light was actually penetrating my tissues and treating a cancer."*-Kim, Patient

But it was. "Radiation Therapy" uses a variety of high-energy waves and particles to shrink tumors and kill cancer cells. There are several different types of radiation, including one you're likely familiar with: X-Rays.

*"X-rays are used in low-doses to take pictures of broken bones and things like that; but when we use it for radiation treatment for cancer, we use high doses of those x-rays - and they're really focused on the tumor itself. And so, by using those high doses, it prevents it from growing."*- Dr. Vishal Gupta, MD, Radiation Oncologist

Radiation does this by damaging the cells' DNA – the molecules that carry genetic information, which let the cells multiply. Attacking the DNA means the cells stop multiplying, or just die.

*"Radiation and chemotherapy are actually fairly similar in how they damage the DNA of a cancer cell; they just the way they go about it - is different."*- Dr. Vishal Gupta, MD, Radiation

As with Chemotherapy, cure is the goal of radiation whenever possible. But it may also be used to: shrink a tumor before surgery, kill any lingering cancer cells after surgery and prevent the cancer from coming back, or relieve symptoms like pain or bleeding. Treatment sessions for radiation are typically much shorter than those for chemo – but more frequent.

*"Each treatment only takes about 10 minutes - so they're fairly quick. But it's five days a week for approximately six weeks. There are different treatment schedules depending on the type of cancer that a patient has; but that*

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*is the typical regimen.”- Dr. Vishal Gupta, MD, Radiation Oncologist*

Another difference is that Chemotherapy affects the whole body, while radiation is targeted to a specific part. Because radiation may kill healthy cells along with cancerous ones, there can be side effects. But they're usually limited to just the area being treated. A common side effect is skin irritation, much like a sunburn. Another is fatigue, which results from the body repairing the damage that treatment does to healthy cells.

*“The other side effects really depend on where the radiation is being aimed. The severity differs between patients, but the good news is that they usually, the majority of those side effects go away two or three weeks after treatment is completed.”- Dr. Vishal Gupta, MD, Radiation Oncologist*

Your health care team can often help manage side effects with medications or other measures.

*“We try to emphasize that this treatment is difficult in the short term, but the goal is usually to cure the patients of the cancer, so it doesn't come back.”- Dr. Vishal Gupta, MD, Radiation Oncologist*

That's certainly the hope for Kim, whose retirement life is once again in full swing.

*“My outlook is positive. And there's still more time to go; I'm not at a year yet. But I believe that this treatment has been successful.”-Kim, Patient*