

Short-course radiation treatment is safe and effective for skin cancer

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Credit: Pennsylvania State University

A recent Penn State College of Medicine physician's study review

suggests that shorter courses of radiation are preferable to longer ones for older patients receiving treatment for slow-growing skin cancers.

Skin basal and [squamous cell cancers](#) are common among patients over 60 years old and are rarely fatal. These cancers—which look like moles, freckles or skin tags—can be removed surgically but in some cases radiation therapy is preferred. Doctors often recommend radiation when these cancers appear in areas such as near the eyes, ears, nose or lips, or in patients on blood thinners or with other health problems that rule out surgery.

Radiation therapy for these skin cancers is delivered in a series of treatments over anywhere from one to six weeks. Shorter-course therapy requires larger doses per [treatment](#), which are expected to cause more damage to the skin that appears years later. Yet, no large study has actually compared the results of different-length courses of [radiation therapy](#) for these cancers.

To reduce the risk of long-term damage, the standard approach has been small, daily doses over the course of weeks. But this drawn-out therapy can be costly and is inconvenient, especially for [elderly patients](#) who may have transportation or mobility issues.

"The way I think of radiation is it's like building a brick wall," said study co-lead author Dr. Nicholas G. Zaorsky, a [radiation oncologist](#) and assistant professor of [radiation oncology](#) at Penn State College of Medicine. "We know how big the wall has to be to kill the cancer cells, but the question is how big do we make the bricks? Historically, we've made the bricks tiny—so if it's over six weeks, five days a week, it's about 30 treatments. We could also make the bricks bigger and get the treatment done faster. The problem for skin cancer is we don't know how big we can make the bricks and still deliver a safe treatment, where the cosmetic result is good."

In a new systematic review and meta-analysis, Zaorsky and colleagues looked at 21 international studies of radiation treatment for slow-growing skin cancers published between 1986 and 2016. The studies included almost 10,000 patients aged 62 to 84 years old who were followed up for anywhere from a year to more than six years after their therapy ended.

The researchers found no difference in long-term cosmetic outcomes between shorter- and longer-course therapies. About 80 percent of patients receiving high-dose, short-course therapies had good cosmetic results, similar to longer-course treatments with smaller radiation doses. The most common types of long-term skin damage reported across the studies were discoloration and the appearance of spider veins. Skin cancer recurrence at the same site was rare among all the regimens, and there were no deaths related to the treatments.

Based on this, the researchers recommend short courses of five, seven or 15 treatments—all adding up to around the same amount of total radiation exposure—for patients over 70 years old, especially if they have trouble traveling for treatments. Younger patients who are 60-70 years old can also consider these regimens, but they may live to see more skin damage from the treatments.

The meta-analysis was recently published in the journal *Radiotherapy and Oncology*.

"The takeaway is that most elderly patients, and most [patients](#) with [skin cancer](#), can get a short course of radiation—just a few treatments—instead of coming in for [radiation](#) almost every day for six weeks, and the cosmetic result will be just as good," Zaorsky said.

More information: Nicholas G. Zaorsky et al. Skin Cancer Brachytherapy vs External beam radiation therapy (SCRiBE) meta-

analysis, *Radiotherapy and Oncology* (2018). [DOI: 10.1016/j.radonc.2017.12.029](https://doi.org/10.1016/j.radonc.2017.12.029)

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