

Nurses' research settles a common cancer concern: Skin care

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Given the complexity of cancer treatment, skin care may seem like a small matter. However, a nurse at the James P. Wilmot Cancer Center knew that skin issues were a constant source of anxiety for many patients receiving radiation therapy, and through research she discovered that routine advice was rooted in myth instead of scientific evidence.

Her findings, which have been published in the *Clinical Journal of Oncology Nursing*, are prompting change locally and across the country.

"We've had a lot of feedback and we're very pleased we could explore a topic that makes a difference for patients going through [cancer treatment](#)," said Trish Bieck, R.N., the study's lead author, who also credited co-author Shannon Phillips, R.N. Both are senior nurse specialists at Wilmot.

As a result of Bieck's study, the National [Cancer](#) Institute revised its recommendations for patients and rewrote its widely distributed brochure, [Radiation Therapy](#) and You, to incorporate the new findings. The Oncology Nursing Society also invited Bieck to serve on its national committee to update patient guidelines.

At the crux of her investigation was whether evidence supports the exclusion of moisturizer or any topical agent on the radiation field within four hours of treatment. Generally, the use of skin lotion is viewed as a way to prevent skin reactions, which are a common and distressing side effect of [radiation treatment](#).

However, one widely held theory is that the presence of lotion can actually increase the risk of a bad skin reaction by inducing a bolus effect, or inadvertently making the skin thicker and thereby boosting the surface dose of radiation.

On the other hand, going without lotion can result in [skin damage](#) and dryness. This can lead to infection and pain, resulting in the interruption of treatment and an increased chance that [malignant cells](#) will repopulate while the skin heals.

So, until now, the patient was left to wonder: Should I use lotion prior to therapy and worry that my treatment is not as effective as it could be? Or do I skip the lotion and risk a skin reaction, infection, or discomfort?

As a compromise, many institutions, including the NCI and the University of Rochester Medical Center's Wilmot Cancer Center, have been telling patients for years to avoid lotions at least four hours before therapy.

"It always bothered me that there didn't seem to be any rationale behind restricting lotions during that particular timeframe," said Bieck, who has worked in Radiation Oncology for 20 years. "When I looked into it, I discovered little evidence to support the four-hour policies. Instead, the practice was based on historical practice - in other words, 'just because, that's the way we do it.' "

She conducted a literature review of relevant articles published between 1992 and 2009, interviewed experts, examined benchmarks at international cancer centers, and consulted with professional organizations. In the United States, she found wide variation in practice: for example, among five institutions spread across all regions of the country, their advice ranged from no lotion restrictions at all to complete avoidance of lotions to restriction of lotions one hour before treatment.

No scientific evidence supported a four-hour restriction of lotions, and no evidence showed that lotion or topical agents such as deodorants made radiation therapy less effective.

Only five scientific articles addressed the topic, though, and based on that small number Bieck believes more research is needed on the safety of lotions used on irradiated skin.

Meanwhile, as a direct result of the project, the Wilmot Cancer Center developed standardized skin-care guidelines and revised its education materials. Now, staff recommends that patients avoid applying lotions immediately before treatment, but allows the patient to maintain some control over their usual skin-care regimen.

Provided by University of Rochester Medical Center

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