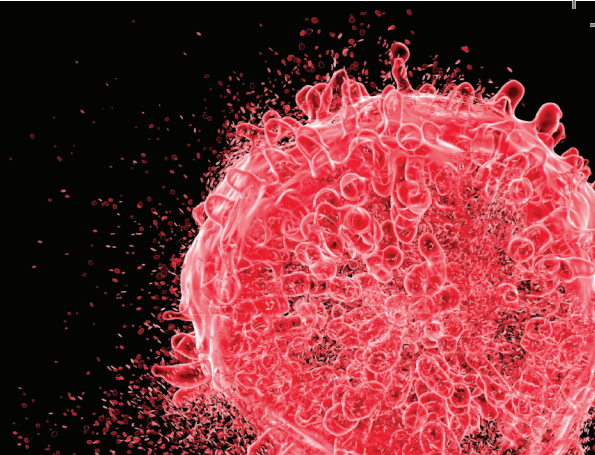


# Targeting Breast Cancer— and its Side Effects

## University of Cincinnati Experts Studying Proton Therapy for Early-Stage Treatment



Advancements in breast cancer detection and treatment have soared over the last several decades, saving countless lives.

Today, almost two-thirds of women with breast cancer are diagnosed within early stages. Nevertheless, most endure the side effects of cancer treatment for years.

Researchers at the University of Cincinnati Cancer Institute's Comprehensive Breast Cancer Center are looking for a way to reduce these side effects—and maybe even the chances of cancer recurrence—through a method called proton therapy radiation.

“For patients with early stage breast cancer, treatment has evolved from mastectomy to breast conservation therapy, which consists of a smaller surgery followed by daily radiation to the entire breast over four to

six weeks,” said Teresa Meier, MD, UC Health radiation oncologist and assistant professor of radiation oncology at the UC College of Medicine.

“However, about one-third of women will experience significant skin toxicity—or redness of the skin that can be painful or tender—related to radiation.”

A clinical trial will determine the effectiveness of a type of radiation, called pencil beam scanning proton therapy, on partial breast radiation. Proton therapy is able to deliver radiation within millimeter levels of precision, saving healthy tissue.

UC researchers will conduct the study at the UC Medical Center Proton Therapy Center—one of fewer than 30 such centers in the country.

While most recurrent cancers happen close to the site of the original treatment surgery, proton therapy is able to spare healthy breast tissue and surrounding organs from radiation—and possibly reduce overall side effects.

“The beam is able to ‘paint’ the targeted area spot-by-spot,” Meier said.

Researchers hope that this pilot study taking place uniquely in Cincinnati will point toward the future of early breast cancer treatment. The study is being funded from the Marlene Harris Ride for Cincinnati grant.

“We’re excited to offer this trial to patients and hope it provides insight into ways we can better and more effectively treat them for overall improved quality of life,” Meier added.



The UC Cancer Institute's Breast Cancer Center is accredited by the National Accreditation Program for Breast Centers, a program of the American College of Surgeons. The center has received distinction as:

- Breast Imaging Center of Excellence by the American College of Radiology
- Certified Quality Breast Center of Excellence by the National Quality Measures for Breast Centers



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