



## Low Skin Dose Patient Positioning Device for Radiation Treatment of Prone Breast

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**WARF: P05448US**

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**The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a pad for breast cancer radiation therapy that allows radiation to be directed at the breast from many angles without increasing the dose to the skin.**

### Overview

In radiation therapy for breast cancer, the patient lies face down on a table with one breast compressed and the other pendant through a hole in the table where it is exposed to radiation. The skin is not burned because the maximum dose is not achieved until the radiation has traveled through a certain amount of tissue, called the build-up region. However, if the radiation is directed at an angle through the padded table, the padding acts as the build-up region, causing the skin to receive a greater dose.

### The Invention

UW-Madison researchers have developed a pad that allows radiation to be directed at the breast from many angles without increasing the dose of radiation to the skin. Instead of requiring a specialized table, a foam pad is laid on a standard table. The pad contains one hole for the targeted breast. The area surrounding the hole is made of a transparent bladder that contains either air or helium. Radiation can be directed through the bladder without accumulating build-up because the gasses provide less mass than padding or tissue.

### Applications

- Radiation therapy for breast cancer

### Key Benefits

- Device rests on top of a standard table, eliminating the need for permanent installation of a bulky, specialized table.
- Can decrease radiation dose to skin by factor of four
- Helium can provide an even greater decrease in skin dosage because of its lesser mass.
- Horizontally symmetric pad may be flipped to target opposite breast.

### Tech Fields

- [Radiation Therapy : External beam therapy.](#)

For current licensing status, please contact Jeanine Burmania at [jeanine@warf.org](mailto:jeanine@warf.org) or 608-960-9846