

Experts say body position in breast cancer radiation treatment matters (w/ Video)

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A simple change of position during radiation therapy can have profound effects on breast cancer patients. Doctors at The Ohio State University's James Cancer Hospital and Solove Research Institute say lying in the prone position reduces the risk of radiation damage to healthy heart and lung tissue.

A new treatment board which allows patients to lie on their stomach in the prone position during radiation treatment is proving more effective for breast cancer patients at The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute.

Dr. Julia White of Ohio State's Comprehensive Cancer Center – James Cancer Hospital and Solove Research Institute has helped develop a modified treatment board that allows patients to lie comfortably on their stomachs while the breast tissue falls away from the chest wall, allowing the radiation to target the cancer. Traditionally, women who undergo [radiation therapy](#) lie on their backs in the supine position. While that approach can be effective, there is a slight chance of radiation damage to healthy heart and lung tissue.

"The prone board allows gravity to pull the breast away from the chest wall, and create a more uniform shape that we can distribute the dose of radiation through evenly," said White, director of Breast Radiation Oncology at the Stefanie Spielman Comprehensive Breast Center. "With this board, we can keep the radiation in front of the ribs, so we don't even need to go into the thoracic cavity and skim the lung and heart."

Each patient uses a bean bag or "vac bag" that is customized to their shape and used to immobilize their arms during the treatment. Additionally, the modified board is able to extend off the treatment table, giving the radiation beam space to make a full rotation around the patient.

Traditional radiation therapy has been associated with long-term problems in the shape of the affected breast, with good cosmetic outcomes found in only 60-to-70 percent of cases.

"By turning a woman over onto her stomach, we can treat the breast underneath the board and reduce the risk of the treatment leaving permanent effects," said White. "We found that we are able to have a really good rate of a good cosmetic outcome in 80-to-90 percent of the women who go through this treatment."

These modifications ease concerns of patients like Kim Doran of New

Albany, OH, who have a family history of heart disease.



Traditionally, breast cancer patients lie on their backs for radiation therapy but a modified approach in which the patient lies on her stomach is proving effective. Doctors at The Ohio State University's James Cancer Hospital and Solove Research Institute say the change in position can lead to safer outcomes and fewer long term problems with the shape of the breast.

"Both my parents passed away from heart attacks. So, having that history of heart disease, my main concern was the radiation affecting my heart,"

said Doran, "It made me feel a hundred percent better to know that that's the procedure I needed to have."

White says that the women who take advantage of the prone-position breast board are typically women who caught their breast [cancer](#) early, who've opted to have a lumpectomy and hope to preserve as much of the [breast tissue](#) and shape of the original breast as possible.

Recent studies show prone radiation therapy cuts the amount of lung and heart tissue affected by radiation therapy by 90 percent.



Dr. Julia White looks at images from a patient's MRI at The Ohio State University's James Cancer Hospital and Solove Research Institute. White says the majority of women she treats for breast cancer now lie face down during radiation therapy. White says the modified position can lead to more accurate and safer treatments in many patients, and has been shown to help protect the shape of the breast better.



A modified radiation treatment table developed by one doctor at The Ohio State University's James Cancer Hospital and Solove Research Institute is helping to make breast cancer treatments safer and more effective for some women. Breast cancer patients who lie on their stomachs and allow the affected breast to be treated underneath the table eliminate the risk of damaging healthy heart and lung tissue during radiation therapy.

Provided by Ohio State University Medical Center

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