

Heart disease risk appears associated with breast cancer radiation

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Among patients with early stages of breast cancer, those whose hearts were more directly irradiated with radiation treatments on the left side in a facing-up position had higher risk of heart disease, according to research letter to *JAMA Internal Medicine* by David J. Brenner, Ph.D, D.Sc, of Columbia University Medical Center, New York, and colleagues.

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Several reports have suggested links between [breast cancer](#) radiation and long-term cardiovascular-related deaths, according to the study background.

Researchers examined the radiation treatment plans of 48 patients with stage 0 through IIA breast cancer who were treated after 2005 at the New York University Department of Radiation Oncology. They calculated the association between [radiation treatment](#) factors, such as mean cardiac dose, [cardiac risk](#), treatment side, body positioning and coronary events.

According to study results, the highest coronary risks were seen for left-sided treatment in women of high baseline risk treated in the supine (lying down, head facing up) position. The lowest risks were for right-sided treatment in low-baseline risk women. In left-sided radiation, prone (lying down, facing down) position reduces cardiac doses and risks, while body positioning has little effect in right-sided therapy (where the heart is always out of field).

"Because the effects of radiation exposure on cardiac disease seem to be multiplicative, the highest absolute [radiation](#) risks correspond to the highest baseline cardiac risk," the authors conclude. "Consequently, radiotherapy-induced risks of major coronary events are likely to be reduced in these patients by targeting baseline cardiac risk factors (cholesterol, smoking, hypertension), by lifestyle modification, and/or by pharmacological treatment."

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