

Can women with early breast cancer skip post-op radiation?

August 20 2020, by Cara Roberts Murez, Healthday Reporter



(HealthDay)—Instead of weeks of radiation following a lumpectomy, a

new study shows that many women with early breast cancer do just as well with only a single dose of targeted radiation that is given during their surgery.

"Breast [cancer](#) outcomes, in terms of cancer coming back, [breast cancer](#) survival, dying from breast cancer, being mastectomy-free, being free of disease elsewhere in the body, all are exactly the same as the usual six weeks of radiation," Dr. Jayant Vaidya, a professor of surgery and oncology at University College London (UCL), said of the single-dose therapy.

"But the most important point was there was a reduction in deaths from causes other than breast cancer," Vaidya said.

The trial, which involved nearly 2,300 women receiving treatment between 2000 and 2012, found the single-dose method to be an effective alternative after following up with patients for a median length of more than eight years.

Three of the study authors—Vaidya, Dr. Michael Baum and Dr. Jeffrey Tobias, all from UCL in the United Kingdom—first embarked on the research about two decades ago. They theorized that radiotherapy focused on the area around the tumor right after the tumor was removed would be enough, Vaidya said, and they made the treatment device in collaboration with industry. In 1998, they treated the first patient using this method.

Gradually, other medical centers joined the trial, learning the technique, treating patients within the parameters of the trial and sending along follow-up information. Eligibility criteria were that women be 45 and older and have invasive ductal carcinoma up to 3.5 centimeters in size. Providers from around the world participated in the study, with patients at 32 medical centers in 10 countries, including the United States.

Prior to the latest results, it was already known that when breast cancer is treated by lumpectomy instead of mastectomy, whole breast radiation in multiple doses reduces the risk of recurrence of cancer in that area, the study authors said.

Also known—because of earlier results from the latest study—was the fact that restricting radiotherapy to just the area around the tumor during the surgery avoided delays in radiation and had patient advantages that included less traveling for treatment, improved quality of life and fewer side effects.

The new information added by this part of the study shows that the single-dose method has "similar long-term local control and cancer survival outcomes to whole breast radiotherapy," according to the report.

Local recurrence of cancer for patients who received the targeted, single dose of radiation was 2.1% at five years, compared to 0.95% of those who received external beam radiotherapy, a number not considered to be clinically significant. Patients who received the single dose also had fewer other cancers, and fewer lung or cardiovascular health problems, Vaidya said. It is unclear why this happened.

"Radiation is known to have side effects if there's scattered radiation when we do whole breast radiation. This radiation is focused. That could be one reason," Vaidya said.

"It could also be that radiation given during surgery at the right time has other beneficial effects," he added. "Whatever the reason, it is a randomized trial and we found a difference and that difference is real. It is not only statistically significant, it is a substantial difference."

Breast cancer affects millions of women worldwide each year. In 2018 alone, 2 million patients were diagnosed with breast cancer, and 626,000

people died of the disease. Most patients can choose to have breast-conserving surgery and radiation, rather than mastectomy.

In 80% of these cases, this single dose of radiation is all they need, Vaidya said. For the other 20%, postoperative results indicate those patients need whole [breast](#) radiation.

Benefits to this treatment also include lower cost, Vaidya said. The treatment is already available in about 260 centers around the world, including about 80 centers in the United States. About 45,000 women have had the single-dose treatment, he noted.

The study findings were published online Aug. 19 in the *BMJ*.

Dr. William Cance, chief medical and scientific officer for the American Cancer Society, said both the large size of the study and the long length of follow-up time were positive factors.

Patients have many choices today for radiation, Cance noted. Choosing to have radiation during surgery may be a quality-of-life issue, and possibly more so in the COVID-19 era, because patients would not need to make repeated trips back to their health care facility for continued treatment.

One limiting factor could be if a patient's medical institution does not have the capability and experience to offer this type of [radiation](#), Cance said.

"I think having the facility that does it will be one of the limiting factors, but I believe it's a promising therapy where less treatment is at least no worse and, as this study shows, it may have some advantages long term," he added.

More information: The U.S. National Cancer Institute has more on [breast cancer treatment](#).

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Citation: Can women with early breast cancer skip post-op radiation? (2020, August 20)
retrieved 12 May 2024 from <https://medicalxpress.com/news/2020-08-women-early-breast-cancer-post-op.html>

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