

Surgeon helps pioneer new approach to breast cancer treatment

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A surgeon with the Breast Health Center at Women & Infants Hospital of Rhode Island, a Care New England hospital, is among the first in New England to adopt an innovative new device that improves the treatment of breast cancer by more precisely targeting radiation treatment and providing for better follow-up exams.

David Edmonson, MD, has helped pioneer the use of the BioZorb marker, a three-dimensional device that is placed in the breast during a lumpectomy, the conservation surgery performed to remove only the cancer and not the entire breast. The BioZorb marker is the first device that identifies in a fixed, 3D manner where the tumor was removed, helping the radiation oncologist more reliably determine where to aim the radiation in follow-up treatments.

The marker consists of a spiral made of a bioabsorbable material that holds six titanium clips. The spiral slowly dissolves in the body over the course of a year or more, leaving the tiny marker clips in place so the surgical site can be viewed for long-term monitoring.

"We've now used the marker with more than 100 patients, and we've found it is useful with a wide variety of patients," said Dr. Edmonson. "The marker has also allowed some [women](#) who would not previously have been candidates for breast conservation treatment to have a lumpectomy. This device helps us achieve better cosmetic outcomes and improves our communication with the radiation oncologist about the specific area of the breast to target with follow-up radiation."

Breast cancer can be treated surgically by mastectomy (breast removal) or by lumpectomy. With lumpectomy, a small amount of tissue containing the tumor is removed. In addition to the surgery, radiation treatment is typically added to "clean up" any microscopic cancer cells that might remain behind in the breast. Using traditional methods, the full course of [radiation treatment](#) was directed at the entire breast. While this approach is proven to reduce the risk of cancer recurrence, it can also expose healthy tissue to radiation.

"Before the Biozorb device was available, we had to rely on techniques that gave us an inexact idea of where to aim the radiation," said Darlene Gabeau, MD, PhD, medical director at 21st Century Oncology, the radiation therapy provider of choice for Care New England. Dr. Gabeau treats many of Dr. Edmonson's patients after surgery. "The new device is sutured right to the involved site providing a three-dimensional representation of the tumor bed allowing more precise treatments."

Among the patients who have benefited from the BioZorb device's availability at Women & Infants is Ann Hall, 59, of Carolina, RI, whose breast cancer was detected earlier this year by mammogram and a biopsy.

Hall went to Women & Infants for treatment, she said, because, "I felt they had the best technology to treat me in the most sophisticated way possible. Dr. Edmonson told me the BioZorb would help them direct the radiation right where they needed to, so there would be less damage to surrounding tissue and organs. That sounded good to me!"

In April of this year, Dr. Edmonson performed Hall's lumpectomy to remove her tumor and placed the marker during surgery. Hall said she is gratified the marker enabled her [radiation oncologist](#) to zero in on the tumor area and minimize any damage to healthy tissue. She is also pleased with the cosmetic results.

"The device kind of filled in the gap where the tumor was, just as Dr. Edmonson said it would," she said. "I think that really does help with the cosmetic outcome. Both my oncologist and radiologist have complemented me on Dr. Edmonson's work."

Explaining how the device helps with the cosmetic aspects of the healing process, Dr. Edmonson said, "The same spiral that helps us mark the tumor site in three dimensions serves as a structure for new tissue to form in and around. So it helps new tissue essentially replace the tissue we took out. Potentially, this helps us achieve a better cosmetic result."

Provided by Care New England

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