

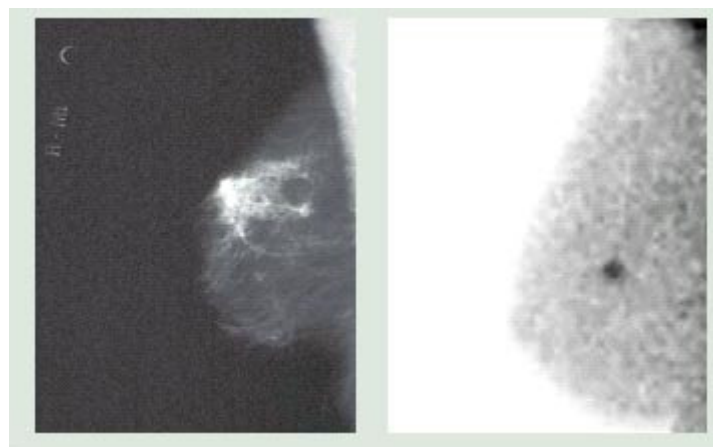


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## New Camera Detects Breast Cancer at Earliest Stages

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The left photo shows a mammogram of a patient's right breast. The right photo shows breast-specific gamma imaging of the same breast with the Dilon 6800 gamma camera. While the mammogram showed no abnormality, the Dilon 6800 image showed a suspicious area that would turn out to be cancer.

### Breakthrough Technology Finds Tumors That Other Tests Don't

Early detection is critical to surviving breast cancer. In their quest to that end, doctors at The George Washington University Hospital are using revolutionary imaging technology — the Dilon 6800 gamma camera — as an innovative approach to detecting breast cancer in its earliest stage. It is past the research phase, and now this technology is available to all patients.

Preliminary data from clinical studies conducted at GW Hospital show the Dilon 6800 can detect cancers other technologies cannot. The camera can locate tumors less than one centimeter in size and those that cannot be felt during a physical exam.

"We looked at 94 women who were at an increased risk for breast cancer and who had normal mammograms and normal physical examinations," says Rachel F. Brem, MD, Director of Breast Imaging and Intervention at The George Washington University Hospital. "In this small population, we found two cancers with the Dilon that would otherwise not have been found. "In 1,000 women who have a screening mammogram, the

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mammogram finds somewhere between two and seven cancers. If you consider that in these 94 women we found two cancers, you'll see what a powerful tool this is."

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The Dilon 6800 is used for women who are considered at high risk for breast cancer and as a follow-up when other screening tools fail to provide enough information.

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### How It Works

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During the procedure, a technician injects a dye compound, called the tracer, into the bloodstream, and the Dilon camera notes where in the breast the tracer is absorbed. In medical terms, taking the tracer from the blood is called "uptake." Cancerous tissue will show an increased uptake when compared to surrounding tissue. Two pictures are taken of each breast, and each image takes 10 minutes. Unlike mammography, there is no breast compression.

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"A woman can read or watch TV or sit quietly during the imaging," explains Dr. Brem. "It's not painful. It's very well tolerated."

Should the report detect an increased uptake in the breast, the next step would be a biopsy to confirm the finding. In some cases where a patient has had a suspicious mammogram and ultrasound, the Dilon 6800 may be able to rule out cancer and thus exclude the need for a biopsy. "It's effective both ways — to help us find more cancers as well as help us differentiate benign from malignant findings," says Dr. Brem.

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### The Dilon Advantage

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Current methods of breast cancer detection are mammogram, ultrasound and magnetic resonance imaging (MRI), each having its own strengths and limitations. "If we already had an approach that diagnosed 100 percent of cancers, we wouldn't have any reason to develop new technology," says Dr. Brem. "The mammogram is an excellent exam, but we know 10 to 15 percent of breast cancers are not visible with mammography," she says. "For women who have dense breasts, up to 35 percent of cancers might not be visible. It's a good exam, but it's imperfect. This is a technique that has been developed to improve breast cancer diagnoses. Women at high risk, especially those with dense breasts, will benefit enormously from this approach."

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This article originally appeared in the Winter 2005 edition of George Washington University Hospital's Health News magazine.