

Mammograms Beat Thermography for Breast Cancer Detection: Study

Newer technology missed half of tumors and yielded many false positives, researchers say

By Kathleen Doheny
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FRIDAY, May 4 ([HealthDay News](#)) -- Thermography -- a breast cancer detection method touted by some as a substitute for mammography -- is an unreliable cancer screen, according to new research.

In a study of about 180 women, thermography missed about 50 percent of cancers and delivered too many false positives, said Dr. C.M. Guilfoyle, a researcher at Bryn Mawr Hospital in Pennsylvania.

The radiation-free screening method uses computer software to measure and compare thermal abnormalities in the breasts and create a breast "map" to look for signs of developing breast cancer. The thinking is that increased temperature is found in areas with increased blood flow, and that may indicate a tumor.

Researchers evaluated the technique, marketed as the No Touch Breast Scan, on the breasts of women undergoing biopsies after they had suspicious findings on other imaging exams.

"I think we are still trying to determine the role of thermography as a breast cancer screening tool," Guilfoyle said. The technology she used was often not able to tell the difference between malignant and benign lesions, she said.

Guilfoyle is expected to present the findings Friday at the American Society of Breast Surgeons' annual meeting in Phoenix.

The test, as its name suggests, involves no physical contact. It is available in the New York City area, and may expand to other locations soon, said Barbara Zimmerly, a company spokeswoman.

It costs about \$150, and it is not covered by insurance at this time. "The test is 88 percent accurate, according to the latest study," Zimmerly said.

Guilfoyle, however, found less accuracy in her evaluation of women with abnormal radiologic findings between October 2009 and May 2011.

For the study, each woman had a thermography test before a tissue biopsy, and Guilfoyle compared the final tissue pathology results with the thermography results. Each breast was interpreted as positive or negative for cancer based on the thermography results.

The healthy breast also was examined with thermography. Two models of the thermography scan were used. One focused on minimizing false negative results; the other focused on minimizing anxiety-provoking false positives.

Depending on which scan model was used, thermography missed about half of all cancers or had an unacceptably high number of false positives when compared to pathology reports on the abnormal breasts, according to the study.

The researchers also found that 47 percent of the normal breasts got a false positive reading on the thermography scan.

The role of thermography is still evolving, said Dr. Kimberly Lovett, attending physician at Southern California Permanente and an investigator at the University of California-San Diego Center for Patient Safety.

Lovett has written about the dangers of online ads that tout thermography as the sole method of breast cancer detection.

"I would tell women that thermography continues to be studied, and the technology will hopefully improve over time," she said. "However, at this time, thermography should absolutely not be used as an alternative to screening mammogram or as an alternative to breast biopsy in the presence of a positive mammogram."

If a woman has a suspicious lesion on a mammogram, the follow-up methods should be an ultrasound or biopsy, or both, Lovett said.

Mammography remains the gold standard for detecting breast cancer, Lovett said. The American Cancer Society agrees that thermography is not a substitute for mammography.

Data and conclusions presented at meetings should be considered preliminary until published in a peer-reviewed medical journal.

More information

For more on breast imaging, visit the [American Cancer Society](#).

SOURCES: C.M. Guilfoyle, M.D., researcher, Bryn Mawr Hospital, Bryn Mawr, Penn.; Kimberly Lovett, M.D., investigator, San Diego Center for Patient Safety, University of California-San Diego; Barbara Zimmerly, No Touch Breast Scan spokesperson; American Society of Breast Surgeons, annual meeting, May 2 to 6, 2012, Phoenix

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