



# Even top docs missing signs of cancer on mammogram

By **Kyung M. Song**, Seattle Times health reporter, 12/12/07

A new three-state study led by Seattle's Group Health Cooperative shows that even the most skilled radiologists fail to detect 20 percent of breast-cancer cases in diagnostic mammograms — which are done when cancer is suspected and when any tumors would presumably be larger and easier to spot.

The findings add weight to concerns about relying on a mammogram, which experts have long said was an imprecise tool for detecting breast cancer. And the research shows that women shouldn't automatically accept a mammogram result — negative or positive — as the final word.

Researchers examined nearly 36,000 mammograms read by 123 radiologists and found that a woman's odds of getting accurate results vary widely depending on who is doing the reading. The worst radiologists missed nearly 40 percent of the tumors and misidentified 8.3 percent of their patients as having nonexistent cancers.

The top performers tended to be doctors at academic medical centers and those who specialized in breast imaging. But even then, **the cancer went undetected in one of five women who turned out to have cancer, while 2.6 percent had false-positive results.** The study appeared online Tuesday in the Journal of the National Cancer Institute. Dr. Pat Dawson, a breast surgeon at Swedish Medical Center, said women should not interpret the study as an indictment against mammograms in general.

Dawson said **routine mammograms indisputably reduce death rates from breast cancer among women over 50.** What's less clear is how much symptom-free younger women benefit from screening, Dawson said.

Women of any age should ideally ask for radiologists who do only breast imaging, Dawson said. Locally, Seattle Cancer Care Alliance, Swedish, Northwest Hospital & Medical Center and Overlake Hospital Medical Center are among those with dedicated breast-imaging radiologists.

The findings come as some health experts' opinions are diverging on the value of mammograms, particularly for younger women. In April, an influential physicians group came out against the wide practice of giving annual mammograms for women 40 to 49, saying women within that age group aren't at a uniform risk of cancer and that the mammograms themselves could expose the women to harm through needless treatments because of a false cancer scare.

Still, mammograms offer a potent early alert for breast cancer, which kills about 40,000 Americans a year.

"Mammography is not perfect. But it's still the best thing at detecting breast cancer," said Diana Miglioretti, an associate investigator at the Group Health Center for Health Studies and the study's lead author.

Traditional mammograms, taken with low-dose X-rays, are notoriously difficult to read. Benign and malignant lesions can look alike. A speck of tumor can be hard to discern from the surrounding breast tissue. Accurate readings rest largely on a radiologist's skill.

Miglioretti and her fellow investigators wanted to know what made one radiologist more accurate than another. They examined 35,895 diagnostic mammograms taken in 72 facilities in Washington, New Hampshire and Colorado.

They matched the radiologists' conclusions (definite or probable negative or positive for cancer) with medical records to find women who were diagnosed with cancer within a year.

Radiologists who concentrated on breast imaging and those who worked at academic medical centers tended to perform better. Those who spent at least 20 percent of their time on breast imaging caught 80 percent of cancers, compared with 70 percent for those with lesser focus — a difference that researchers said is probably not due to chance.

Affiliation with academic medical centers was the single biggest factor in successful cancer-detection rates, although investigators could not rule out chance as the reason because only seven of the 123 radiologists fit into that group.

On the other hand, the sheer number of mammograms read did not meaningfully raise a radiologist's performance. The researchers suggested creating imaging centers staffed by radiologists who specialize in breast imaging, Miglioretti said.

The study's findings on diagnostic mammograms echo previous research on screening mammograms, which many women get annually starting at age 40. Diagnostic mammograms, by contrast, are performed when a lump or something unusual is discovered in the breast. Of every 1,000 woman undergoing diagnostic mammograms, 44 will have cancer, compared with five women who get screening mammograms.

The radiologists with the highest detection rates for cancer also tended to have slightly higher false-positive rates. That might be an acceptable trade-off for a diagnostic mammogram, where finding the cancer is paramount, Miglioretti said.

Given mammogram's well-documented error rates, Miglioretti said, women should always heed their instincts. "If you have a lump in your breasts, even if you had a recent negative mammogram, you still need to see your doctor," she said.