

Physicians who interpret mammograms may benefit from additional training

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A multi-site study led by an Oregon Health & Science University Knight Cancer Institute researcher has identified set criteria that could be used to help identify physicians who might benefit from additional training in interpreting screening mammograms.

Patricia A. Carney, Ph.D., OHSU School of Medicine professor of family medicine, and of public health and preventive Medicine; and associate director of Cancer Prevention, Control and Population Studies in the OHSU Knight Cancer Institute, is the principal investigator on the study, and the lead author of a paper on these findings published in the May edition of the journal *Radiology*.

The study was performed over eight months in 2009. A panel of 10 expert radiologists was chosen to analyze performance data from hundreds of interpreting <u>physicians</u> across the United States. The panel members were considered experts because they had devoted more than 75 percent of their time to breast imaging, had been interpreting <u>mammograms</u> for at least 10 years, had either completed fellowship training in breast imaging, or had more than 15 years' experience interpreting mammograms. The majority of the interpreting physicians whose performance data were analyzed were radiologists.

The study did not identify individual physicians, but rather looked at several measures that reflect the accuracy of interpretive performance, such as accuracy of detecting breast cancer, and potential overuse of additional tests for findings that turn out to be benign. The panel



identified criteria, or "cut points," that targeted ranges of lowperformance measures. By applying these criteria to physicians interpreting screening mammograms whose performance is known, the researchers found that as many as 18 percent to 28 percent of physicians interpreting screening mammography could benefit from additional training in detecting breast cancer accurately, and as many as 34 percent to 49 percent may need help to reduce the likelihood of unnecessary work ups.

"It is important to note that mammography is not a perfect test, even with the most expert radiologists," says Carney. "We have identified what we believe to be minimally acceptable performance levels for interpreters of screening mammography. It is also important to note that we looked at several ranges of measures, all of which need to be taken into account when identifying low performers. Physicians who interpret screening mammograms and whose performance fall outside the identified cut-points might benefit from additional training to improve their interpretive performance."

"It is true that physicians who interpret screening mammograms below our cut points may be missing cancers and doing unnecessary workups," says Carney. "We want to give these physicians the tools they need to interpret screening mammograms at the highest level."

Carney acknowledges the results of the study are controversial. "This is the first time anyone has identified criteria for low performance," she says, "but women having mammograms should not be overly concerned by these findings because every mammography facility has a designated physician who is charged with monitoring available performance measures." Carney advises all women to talk to their physicians about their concerns regarding screening mammograms and their personal risk factors for breast cancer. "If you have any concerns at all, based upon your risk, you could ask for a second interpreter to look at your film."



The study was a collaboration among OHSU; the Universities of California: San Francisco, Los Angeles, and Irvine; Washington University; St. Louis, Carol Anne Read Breast Health Center, Oakland, Calif.; the American Cancer Society; University of New Mexico, Albuquerque; Group Health Research Institute, Seattle, Wash; Stevens Hospital Breast Center, Edmonds, Wash.; Swedish Medical Center, Seattle, Wash.; Carol Milgard Breast Center, Tacoma, Wash.; University of Washington, Seattle; University of Vermont; University of North Carolina; Dartmouth Medical School; and The Cooper Institute in Denver, Colo.

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Provided by Oregon Health & Science University

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