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Contribution of clinical breast examination to breast cancer screening

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Breast cancer detection rates and sensitivity were higher, but so were false-positive rates, among mammography centers that offered clinical breast examination in addition to mammography, according to new study published online August 31 in the *Journal of the National Cancer Institute*.

There is controversy about whether adding clinical breast examination to mammography improves the accuracy of breast screening.

To address this, Anna M. Chiarelli, Ph.D., of the Populations Studies and Surveillance, Cancer Care Ontario, and colleagues compared the accuracy of screening among centers that offered clinical breast examination in addition to mammography with that of centers that offered only mammography.

Using a cohort of more than 290,000 women within the Ontario Breast Screening Program screened between January 2002 and December 2003, the researchers found that the sensitivity of referrals was higher for women who were screened at centers that offered clinical breast examination and mammography than for women who were screened at centers that did not offer clinical breast examination. However, women without cancer who were screened at centers that offered clinical breast examination had a higher false-positive rate than women screened at centers that offered only mammography.

"Overall, we found higher breast cancer detection rates and sensitivities

for [clinical breast examination] referral than those previously found in other community-based studies, which suggests that the accuracy of [clinical breast examination] can be improved in screening programs that offer high-quality [clinical breast examinations] by specially trained nurses," the authors write. However, they note, the benefits of adding clinical breast examination must be weighed against potential risks and costs due to false-positive results and the anxiety associated with additional evaluations.

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In an accompanying editorial, Mary B. Barton, M.D., MPP, of the Agency for Healthcare Research and Quality in Rockville, Md., and Joann G. Elmore, M.D., MPH, of the University of Washington School of Medicine in Seattle, note the "steep price" for the potential gains of adding clinical breast examination to mammography.

For a theoretical population of 10,000 women between the ages of 50 and 69 years, the addition of clinical breast examination would lead to the detection of breast cancer in only four women whose cancer would be missed by mammography. However, adding clinical breast examination would also lead to false-positive results for an additional 219 women, the editorialists point out.

"More answers are needed on the role of [clinical breast examination] in breast cancer screening before definitive recommendations for or against its use can be made," they write. "While we wait for those answers, the data presented by Chiarelli et al. suggest that [clinical breast examination] must be done well if it is to be done at all, with the acknowledgment that overall referrals and false-positive results will increase."