

NEWS REPORT

Screening Mammography Correlates With Less-Morbid Treatment for Women Diagnosed With Breast Cancer

By Kara A. Nyberg, PhD

January 25, 2005 — Women with breast cancer diagnosed by screening mammography are more likely to avoid undergoing mastectomy and chemotherapy than those diagnosed by physical examination, according to a recent study published in the *American Journal of Roentgenology*.

Richard J. Barth, Jr., MD, of the Dartmouth Medical School and the Norris Cotton Cancer Center in Lebanon, New Hampshire, led the retrospective study involving 992 women who underwent surgery for invasive breast cancer. The purpose of the study was to determine whether the mode of breast cancer detection can affect the type of treatment administered.

Patients diagnosed by screening mammography, compared with those diagnosed by physical examination, had significantly smaller tumors (1.5 vs 2.9 cm, $P < .0001$) and were less likely to have involved regional lymph nodes (17% vs 38%, $P < .0001$). Additionally, more patients diagnosed by screening mammography avoided mastectomy than those whose tumors were diagnosed by physical examination (56% vs 32%, $P < .0001$). The former patients were also half as likely to receive chemotherapy (28% vs 56%, $P < .0001$).

Multivariate analyses confirmed that the mode of breast cancer detection independently predicts patient treatment. In addition, women diagnosed by physical examination were more than twice as likely to undergo mastectomy vs lumpectomy (odds ratio [OR] = 2.5; 95% confidence interval [CI] = 1.9-3.3) and almost 3 times as likely to receive chemotherapy (OR = 2.9; 95% CI = 2.1-3.9) than women diagnosed by screening mammography. When stratified by age, women aged 70 years and older who were diagnosed by physical examination were 5.8 times (95% CI = 3.2-10.5) more likely to undergo mastectomy vs lumpectomy and 4.6 times (95% CI = 1.6-13.3) more likely to receive chemotherapy than women diagnosed by screening mammography.

"If you are unfortunate enough to develop breast cancer, it would be best if you could be appropriately treated with minimally toxic therapy," Dr. Barth told *Clinical Care Options*. The evidence in this study supports the utility of screening mammography to diagnose breast cancers at earlier stages, leading to a decrease in treatment morbidity

for women of all ages, especially those who are 70 years old or older. Dr. Barth adds that annual mammography starting at age 40 optimizes a woman's chance of being optimally treated with less toxic therapy.

Reference

Barth RJ, Gibson GR, Carney PA, Mott LA, Becher RD, Poplack SP. Detection of breast cancer on screening mammography allows patients to be treated with less-toxic therapy. *AJR Am J Roentgenol*. 2005;184:324-329.

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