

Does mammographic breast cancer screening impact disease stage presentation and survival in Asian women?

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Introduction: Breast cancer is the leading cause of cancer death amongst Singaporean women for the past 30 years. Mammographic screening has been shown to be effective in early detection of breast cancer in Western populations; however there are few studies evaluating its impact among Asian women.

Objectives: This study aims to examine the differences in disease stage at presentation and outcome between breast cancer patients who were detected by screening (screen-detected) and those who presented symptomatically (symptomatic) from the experience of a regional hospital in Singapore.

Methods: Data of female patients diagnosed with primary breast cancer and treated from January 2002 - December 2008 were extracted from the prospectively collected breast cancer registry and analyzed with SPSS v15.0. Univariate and multivariate analyses were performed to examine the profile of symptomatic patients and factors that influence presentation at an early disease stage. Survival and recurrence rates were computed by Kaplan-Meier method and compared by log rank test.

Results: The study population consisted of 761 patients (82 screen-detected and 679 symptomatic). The screen-detected patients were more likely to present at an earlier stage (OR=25.3, 95% CI: 3.7-184, $p=0.001$) and have better overall cancer-specific survival as compared to symptomatic patients ($p=0.008$).

Malay women (OR=0.31, 95% CI: 0.11-0.89, $p=0.029$ for Malays vs Chinese) and those without a family history of breast cancer (OR=0.36, 95% CI: 0.19-0.64, $p=0.001$) were found to be less likely to be detected by screening.

Conclusions: Mammographic screening appeared to enable the detection of oncologically more favorable lesions and conferred better overall cancer-specific survival in Asian women. There is possibly room for more targeted education efforts to reach out to Malay women and those without family history of breast cancer to attend breast cancer screening.