

Profile of breast cancer in a group of women in a developing country in South Asia: is there a difference?

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Abstract

Background: Breast cancer is the commonest cancer among Sri Lankan women. The aim of this study was to document the breast cancer profile of a group of Sri Lankan women and compare it with regional data. Patient-tumor characteristics and predicted prognosis are compared with the immune profile.

Methods: A total of 814 Sri Lankan women with breast cancer were studied, with their information retrieved from patient records. Tumor type and grade were reassessed on routine tissue sections. The Nottingham Prognostic Index (NPI) was calculated. Estrogen receptors (ER) and human epidermal receptor 2 (HER2) were assessed using Dako antibodies. Strong nuclear staining for ER in >10% of tumor cells and strong, complete cell membrane staining (3+) for HER2 were regarded as positive. An SPSS-16 software program and the chi-squared test were used for statistical analysis.

Results: The highest prevalence (32%) was in the 50- to 59-year age cohort (mean +/- SD 51.88 +/- 11.939 years). In all, 58% of the tumors measured between 2 and 5 cm. Most (52%) were moderately differentiated and were invasive ductal carcinomas (86.3%). Regional lymph node metastasis was present in 41% of the patients. ER was expressed in 31.7% and was more frequent in women >35 years ($p < 0.024$). HER2 was found in 14.5% of tumors. Its expression was lower in ER-positive tumors ($p < 0.000$). Well-differentiated tumors were frequently ER-positive ($p < 0.000$) and HER2-negative ($p < 0.001$). The NPI was better for ER-positive ($p < 0.000$) and HER2-negative tumors ($p < 0.028$).

Conclusions: The overall profile of breast cancer and immune characteristics of Sri Lankan women in this study was largely comparable to profiles documented elsewhere in the region despite the lower prevalence of ER.