The age 30 is a reliable cutoff for defining breast cancer in young women with bad outcomes in China

Breast Cancer

Ying He
Hongwu Deng, Nengbin Wan, Yi Zhang, Guopeng Li, Linti Lu, Xiao He, Zhengyu Zhou

1 Hunan Cancer Hospital, Changsha, Hunan, P.R. China

Introduction/Purpose
Breast cancer in young women is considered to be associated with poor prognosis and is not suitable for breast-conserving surgery. However, the majority of young women have strong desires to maintain physical integrity of the breast after surgery. Currently, no standard definition of young breast cancer is available, and the age 35 is considered the cutoff point for prognosis prediction in western countries. However, the age distribution of breast cancer patients is different between China and western countries. It is important to explore the relationship between age and prognosis of young women with breast cancer in China.

Methods
Clinical data of 3577 patients with pathologically confirmed breast cancer, who underwent surgery at Hunan Cancer Hospital between January 1992 and December 2005, were reviewed. Three cutoff points of age, 30, 35, and 40, were used to define breast cancer in young women. Patient survival was analyzed with the Kaplan-Meier method. The COX proportional hazards model was used for multivariate analysis. The clinicopathologic characteristics were compared between young and elderly patients using the Chi-square test.

Results
The median age of the 3577 patients was 46 (range, 21-85) years. The survival was significantly different between young and elderly patients only when the age 30 was used as the cutoff point (P = 0.043); the 5- and 10-year survival rates were significantly lower in patients at the age of < 30 years than in those at the age of ≥ 30 years (5-year: 66.9% vs. 76.7%; 10-year: 47.3% vs. 54.4%). The multivariate analysis showed that age (P = 0.025), lymph node status (P < 0.001), clinical stage (P < 0.001), and estrogen receptor status (P = 0.006) were independent prognostic factors. An age under 30 years was associated with large mass (P = 0.038), high lymph node metastasis (P = 0.019), and advanced stage (P = 0.021).

Conclusions
Age is an independent prognostic factor in patients with breast cancer. The age 30 may be a reliable cutoff for the identification of young patients with poor prognosis in China. Patients at the age 30-35 may also benefit from breast-conserving surgery, maintaining physical integrity of the breast and quality of life.