A PROGNOSTIC INDEX FOR LOCOREGIONAL RECURRENCE (LRR) AFTER NEOADJUVANT CHEMOTHERAPY (NAC)


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Aim: The aim is to analyse incidence and prognostic factors for LRR in breast cancer (BC) patients treated with NAC to develop a prognostic score to help for clinical decision-making.

Methods: Using our prospective maintained BC database we identified 730 patients treated with NAC between 1998 and 2014. Main patients’ characteristics are in table 1. To indentify variables associated with increased LRR rate we performed firstly Kaplan-Meier curves, with comparisons among groups using log-rank test, and then significant variables were included in a multivariate analysis using Cox proportional hazards. The prognostic index was developed by arising score 0 (favourable) or 1 (unfavourable) for each significant variable of multivariate analysis and was created separately for patients with breast conservative surgery (BCS) and mastectomy.

Results: At a median follow-up of 72 months, the 6-year cumulative incidence of LRR was 7.2% (±3%) for BCS and 7.9% (±3%) for mastectomy. By univariate analysis, variables associated with increased LRR were for BCS; HER2-positive, grade III, DCIS, No-pCR (ypTis,ypN0), and age < 40y; and for mastectomy; HER2-positive, DCIS, No-pCR and LVI. By multivariate analysis were for BCS; HER2-positive (HR 11.1, p = .001), DCIS (HR 3.1, p = .005), age < 40y (HR 2.8, p = .02); and for mastectomy HER2 positive (HR 8.5, p = .03), DCIS (HR 2.7, p = .01), No-pCR (HR 11.4, p = .01) and age < 40y (HR 2.8, p = .006).The score stratified patients into 3 subsets with statistically different level of risk for LRR. For BCS, the 6-year LRR rates were 3%, 13% and 33% for the low (score 0), intermediate (score 1), and high (score 2-3) risk groups, respectively (p = .001). For mastectomy, the 6-year LRR rates were 0%, 8% and 27% for the low (score 0), intermediate (score 1-2), and high (score 3-4) risk groups, respectively (p = .001). Of note, 21 patients had a LRR event were HER2-positive, of all of them had received trastuzumab.

Conclusions: The score enabled the identification of a group (7%) of patients with high risk of LRR, and who may benefit from alternative or additional treatment.

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