SUPPLEMENTARY MATERIALS

Supplementary Methods

Protocol and participating hospitals

The protocol was provided online at http://www.sibcs.com. The actual recruitment was conducted in 8 hospital, including Fudan University Shanghai Cancer Center, Chongqing Cancer Hospital, Shanghai First Maternity and Infant Hospital, Fudan University Obstetrics and Gynecology Hospital, Shanghai Sixth People's Hospital, Tongji University School of Medicine Yangpu Hospital, The International Peace Maternity & Child Health, Hospital of China Welfare Institute, and Shanghai Ninth People's Hospital Huangpu Branch. The enrolment of patients was competitive among the participating hospitals.

Patients were ineligible if they had bilateral breast cancer at diagnosis, had locally advanced, metastatic, or *de novo* Stage IV disease, had triple-negative or HER2-positive breast cancer, received preoperative anticancer therapy (including chemotherapy, endocrine therapy, and radiotherapy), had previous or concurrent cancer except excised basal cell skin carcinoma and cervical carcinoma in situ, were pregnant or breastfeeding, or had a pre-existing peripheral neuropathy, documented history of cardiac disease contradiction anthracyclines, allergy to cremophor-containing medications, or any clinically uncontrolled conditions.

Chemotherapy should be initially administered within 8 weeks after initial breast cancer surgery. Concurrent or extended treatments of other chemotherapeutic regimens

were forbidden. Adjuvant radiotherapy, if necessary, was initiated within 4 weeks after the last cycle of chemotherapy. Radiation was mandatory for all patients who had undergone breast-conserving surgery, and the radiotherapy procedures were similar for both groups at a given centre.

Adverse events were recorded at each treatment visit and at each follow-up visit. Follow-up visits were scheduled every 3 months for the first 3 years and then every 6 months for the next 2 years. Resumption of menses was assessed every 3 months for 3 years after chemotherapy (calculated from the last dose of chemotherapy). During the follow-up, FSH and estradiol levels were tested when necessary but were not mandatory.

Outcomes

The definition of DFS, DDFS, and OS were as followings. Events of disease-free survival (DFS) included non-invasive and invasive breast cancer recurrences (local, regional, or distant), second primary non-invasive and invasive breast and other cancers other than basal/squamous-cell carcinoma of the skin and carcinoma in situ of the cervix, and death from any cause. Distant disease-free survival (DDFS) was defined as the time from random assignment to distant recurrence. Overall survival (OS) was defined as the time from randomization to death with any cause.

Supplementary Figure 1. The 12-month landmark analysis of disease-free survival