Survival Outcome of Concurrent GnRH Agonist Plus Tamoxifen is Comparable to That of Sequential Adriamycin and Cyclophosphamide Chemotherapy Plus Tamoxifen in Premenopausal, Lymph Node-Negative, Hormone-Responsive, HER2-Negative, T1-2 Breast Cancer Patients

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Background/Purpose: The purpose of this study was to compare treatment outcomes between gonadotropin-releasing hormone (GnRH) agonist plus tamoxifen and adriamycin and cyclophosphamide (AC)-containing chemotherapy plus tamoxifen in hormone-responsive, premenopausal, node-negative, breast cancer patients.

Methods: A total of 994 premenopausal women with node-negative, hormone receptor-positive, human epidermal growth factor receptor (HER2)-negative, breast cancer were included in this retrospective cohort study: 608 patients (61.2%) were treated with GnRH agonist together with tamoxifen, and 386 patients (38.8%) were treated with AC-containing chemotherapy with tamoxifen.

Results: The median follow-up period was 7.4 years. In premenopausal, lymph node-negative, hormone-responsive, HER2-negative, T1-2, breast cancer patients, an age younger than 39 years and a higher T stage were independent negative prognostic factors (p = 0.013 and 0.047, respectively). In subgroup analysis, patients were divided into four groups according to their T stage and age. In each subgroup, there were no survival differences for disease-free survival, cancer-specific survival, and overall survival between the two treatment groups.

Conclusion: Adding GnRH agonist to tamoxifen is a reasonable alternative to adding AC chemotherapy to tamoxifen in premenopausal, hormone-responsive, HER2-negative, lymph node-negative, T1-2, breast cancer patients.