Aim: Trastuzumab is the first anti-HER2 humanized monoclonal antibody. The benefit of adjuvant trastuzumab has been shown in randomized phase 3 trials. Despite trastuzumab being recommended for 52 weeks in the adjuvant treatment of HER-2 positive breast cancer according to the current breast cancer guidelines, there is still no consensus on the optimal duration of adjuvant trastuzumab. The aim of our study is to investigate the efficacy and safety of adjuvant 9-weeks and 52-weeks trastuzumab in axillary lymph node-positive HER-2 positive breast cancer patients, retrospectively.

Methods: A total of 271 HER-2 and axillary node-positive breast cancer patients who received trastuzumab as adjuvant treatment between 2005 and 2013 years were retrospectively analyzed. Patients with axillary node-positive HER-2-positive breast cancer who were non-metastatic were enrolled to the study. Patients were considered as 9-week trastuzumab group (n = 155) and 52-week trastuzumab group (n = 116). Kaplan-Meier survival analysis was carried out for disease-free survival (DFS) and overall survival (OS). Two-sided P values of <0.05 were considered statistically significant.

Results: The median follow-up time for this analysis was 34 (4-95) months. Patients’ clinical and pathological characteristics are well-balanced between the two treatment arms. In the 9-week trastuzumab treatment group, DFS rate was 96.7%, 84.8% and 74.9% whereas in 52-week trastuzumab treatment group, DFS rate was 94.3%, 80.0% and 80.0% in the first, third and fifth years, respectively (P = 0.76). In the 9-week trastuzumab treatment group, OS rate was 99.3%, 92.2% and 88.3% whereas in the 52-week trastuzumab treatment group, OS rate was 99.0%, 94.7% and 78.6% in the first, third and fifth years, respectively (P = 0.99). In both groups, symptomatic heart failure was not reported but asymptomatic left ventricular ejection fraction (LVEF) decline was observed in 3 (1.9%) and 18 (15.5%) patients in the 9-week and 52-week trastuzumab treatment groups, respectively (P <0.001).

Conclusions: In our study, the efficacy of 52-weeks and 9-weeks trastuzumab was similar in node-positive HER-2 positive breast cancer. Cardiotoxicity was significantly increased in 52-weeks trastuzumab arm compared with the 9-week trastuzumab arm.

Disclosure: All authors have declared no conflicts of interest.