

The sequencing of chemotherapy and radiotherapy in breast cancer patients after mastectomy

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ABSTRACT

Background. The purpose of the study was to retrospectively evaluate the outcome according to the sequencing of radiotherapy and chemotherapy after mastectomy in high-risk patients with breast cancer.

Methods. From January 1986 through September 2000, 275 women with stage I-IIIb breast cancer were treated with chemotherapy and radiotherapy after mastectomy. The patients were divided into four groups. Chemotherapy was given first in 116 patients (CTRT), concurrent chemoradiotherapy in 77 (CCRT), sandwich therapy in 65 (SAND), and radiotherapy first in 17 (RTCT). Prognostic factors such as age, primary tumor size and nodal status were not statistically different among the four groups. There was a higher proportion of patients with close or positive margins in CCRT and RTCT groups than in the CTRT and SAND groups (22/77, 5/17 vs 3/116, 2/65, $P < 0.001$).

Results. Median follow-up was 145 months (range, 10-210). Five-year overall and disease-free survival were 69.4% and 56.1%, respectively. Survival outcomes were not statistically different among the four groups (5-year overall/disease-free survival, 68.0%/63.0%, 71.3%/60.8%, 65.0%/48.1%, 81.9%/58.8%, in CTRT, CCRT, SAND, and RTCT, respectively) ($P = 0.3422/P = 0.6333$). The incidence of local-regional recurrence was not different in the early radiotherapy group (CCRT/RTCT, 11%/12%) and delayed radiotherapy group (CTRT/SAND, 7%/8%).

Conclusions. This study suggests that in these high-risk breast cancer patients after mastectomy, delay in the start of radiotherapy does not increase local-regional recurrence, and the final survival outcomes are not affected by the sequencing of chemotherapy and radiotherapy. **Free full text available at www.tumorionline.it**

Key words: breast cancer, chemotherapy, radiotherapy, sequence.

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