

# **Trastuzumab in the adjuvant treatment of early-stage breast cancer: a systematic review and meta-analysis of randomized controlled trials.**

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## **Source**

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## **Abstract**

### **BACKGROUND:**

We performed a systematic review and meta-analysis to compare treatment outcomes for human epidermal growth factor receptor (HER)-2-positive breast cancer patients receiving adjuvant chemotherapy with or without trastuzumab.

### **METHODS:**

We identified randomized clinical trials comparing adjuvant chemotherapy with or without trastuzumab in patients with resectable breast cancer. Fixed-effects meta-analysis was used to combine data.

### **RESULTS:**

Five eligible trials were identified, reporting outcomes on 13,493 women. Fixed-effects analysis showed disease-free survival to be superior for trastuzumab-treated patients (risk ratio [RR], 0.62; 95% confidence interval [CI], 0.56-0.68). Superiority was also observed for patients receiving trastuzumab with respect to mortality (RR, 0.66; 95% CI, 0.57-0.77), locoregional recurrence (RR, 0.58; 95% CI, 0.43-0.77), and distant recurrence (RR, 0.60; 95% CI, 0.52-0.68). Patients receiving trastuzumab with chemotherapy had a higher risk for congestive heart failure (RR, 7.60; 95% CI, 4.07-14.18) and left ventricular ejection fraction decline (RR, 2.09; 95% CI, 1.84-2.37). A higher risk for central nervous system metastasis as the first recurrence event (RR, 1.60; 95% CI, 1.06-2.40) was also noted in patients receiving trastuzumab.

### **CONCLUSIONS:**

The use of trastuzumab should be considered an integral part of the adjuvant therapy of HER-2-positive breast cancer patients.