

MICROMETASTASES AND BREAST CANCER

Sentinel-node biopsy can detect micrometastases or isolated tumor cells in the regional lymph nodes of patients with breast cancer; however, whether the presence of very low numbers of metastatic cells influences the outcome in these patients is currently unclear. De Boer and colleagues carried out a study to investigate the relationship between the presence of isolated tumor cells or micrometastases in regional lymph nodes and clinical outcome in patients with breast cancer who had undergone sentinel-node biopsy.

The authors used The Netherlands Cancer Registry to identify women with invasive breast cancer who had undergone sentinel-node biopsy before 2006 and had favorable primary tumor characteristics. Three cohorts were included in the analysis: node-negative patients who did not receive systemic adjuvant therapy ($n=856$), node-positive patients who did not receive adjuvant therapy ($n=856$) and node-positive patients who received systemic adjuvant therapy ($n=995$). The primary end point was 5-year disease-free survival.

After a median follow-up of 5.1 years, the hazard ratio for disease recurrence was 1.50 in patients with isolated tumor cells who received no systemic treatment compared with patients in the node-negative, no-adjuvant-treatment group. The hazard ratio was 1.56 for patients with micrometastases. Analysis of the effect of systemic adjuvant therapy on outcome in patients with micrometastases or isolated tumor cells gave a hazard ratio of 0.57 in patients who received adjuvant therapy versus those who did not.

The authors conclude that the presence of isolated tumor cells or micrometastases is associated with a reduction in 5-year disease-free survival in women who do not receive adjuvant therapy. Disease-free survival was improved in node-positive women who were treated with adjuvant therapy.

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Original article De Boer, M. *et al.* Micrometastases or isolated tumor cells and the outcome of breast cancer. *N. Engl. J. Med.* 361, 653–663 (2009).