Site of primary tumor has a prognostic role in operable breast cancer: the international breast cancer study group experience

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PURPOSE: Cancer presenting at the medial site of the breast may have a worse prognosis compared with tumors located in external quadrants. For medial tumors, axillary lymph node staging may not accurately reflect the metastatic potential of the disease. PATIENTS AND METHODS: Eight-thousand four-hundred twenty-two patients randomly assigned to International Breast Cancer Study Group clinical trials between 1978 and 1999 were classified as medial site (1,622; 19%) or lateral, central, and other sites (6,800; 81%). Median follow-up was 11 years. RESULTS: A statistically significant difference was observed for patients with medial tumors versus those with nonmedial tumors in disease-free survival (DFS; 10-year DFS, 46% v 48%; HR, 1.10; 95% CI, 1.02 to 1.18; P = .01) and overall survival (10-year OS 59% v 61%; HR, 1.09; 1.01 to 1.19; P = .04). This difference increased after adjustment for other prognostic factors (HR, 1.22; 95% CI, 1.13 to 1.32 for DFS; and HR, 1.24; 95% CI, 1.14 to 1.35 for OS; both P = .0001). The risk of relapse for patients with medial presentation was largest for the node-negative cohort and for patients with tumors larger than 2 cm. In the subgroup of 2,931 patients with negative axillary lymph nodes, 10-year DFS was 61% v 67%, and OS was 73% v 80% for medial versus nonmedial sites, respectively (HR 1.33; 95% CI, 1.15 to 1.54; P = .0001 for DFS; and HR 1.40; 95% CI, 1.17 to 1.67; P = .0003 for OS). CONCLUSION: Tumor site has a significant prognostic utility, especially for axillary lymph node-negative disease, that should be considered in therapeutic algorithms. New staging procedures such as biopsy of the sentinel internal mammary nodes or novel imaging methods should be further studied in patients with medial tumors.