

## CHEMOTHERAPY

### Paclitaxel adjuvant therapy improves relapse-free survival

The addition of paclitaxel to anthracycline-based adjuvant chemotherapy significantly improves relapse-free survival (RFS) in patients with operable breast cancer, according to a new study. Although taxanes are efficacious in patients with advanced breast cancer, little is known about the efficacy of different adjuvant and neoadjuvant regimens. A multicenter, randomized, phase III study led by Gianni and coauthors in patients with advanced breast cancer, assessed whether the addition of paclitaxel to an anthracycline-based regimen administered preoperatively or postoperatively led to improved RFS.

A total of 1,355 women were randomly allocated to one of three arms: surgery followed by doxorubicin followed by cyclophosphamide, methotrexate and 5-fluorouracil (CMF) chemotherapy (arm A); surgery followed by paclitaxel followed by CMF (arm B); or neoadjuvant paclitaxel and doxorubicin followed

by CMF followed by surgery (arm C). The addition of paclitaxel to adjuvant doxorubicin significantly improved RFS and distant RFS compared with the arm lacking paclitaxel. The 7-year survival was similar between arms and remains <1% after 7 years of follow-up. There was no significant difference in RFS, however, when paclitaxel, doxorubicin and CMF were given before or after surgery. The rate of breast-conserving surgery was significantly greater for patients who received preoperative chemotherapy compared with postoperative treatment. All three regimens were well tolerated with no detrimental effect of adding paclitaxel to anthracycline-based chemotherapy or need for hemopoietic growth factor support. Long-term safety data indicate that cardiac function was well maintained in the majority of patients. The addition of paclitaxel did not seem to increase the risk of cardiac failure.

Incorporating paclitaxel into an anthracycline-based adjuvant chemotherapy

regimen resulted in a significant improvement in RFS and distant RFS. When paclitaxel was administered as neoadjuvant therapy, considerably more patients received breast-sparing surgery. The results of this trial also correlate with the findings of other trials demonstrating that taxane-based adjuvant regimens are superior to anthracycline-based regimens in terms of improvements in recurrence rate. This non-cross-resistant, sequential regimen represents another treatment option for patients with operable breast cancer, especially those who wish to avoid mastectomy.

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**Original article** Gianni, L. *et al.* Phase III trial evaluating the addition of paclitaxel to doxorubicin followed by cyclophosphamide, methotrexate, and fluorouracil, as adjuvant or primary systemic therapy: European Cooperative Trial in Operable Breast Cancer. *J. Clin. Oncol.* 27, 2474–2481 (2009).