

# Adjuvant Trastuzumab for HER2-Positive Early Breast Cancer:

## A Review of Clinical Data With Nursing Implications

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This article reviews clinical data on adjuvant trastuzumab (Herceptin®, Genentech, Inc.) for patients with HER2-positive early breast cancer. Published articles were searched via PubMed (1985–2009), and abstracts were located from meeting books or search engines of congress Web sites (1994–2009). Search terms included *breast neoplasms*, *breast cancer*, *breast tumor*, or *breast tumour* and *adjuvant* plus *HER2-positive* plus *trastuzumab*. Trastuzumab improves clinical outcomes as well as disease-free and overall survival for patients with early HER2-positive breast cancer compared with adjuvant chemotherapy alone in this population. Trastuzumab has a favorable safety profile; levels of cardiac dysfunction were acceptable in all adjuvant trials, and cardiac dysfunction was manageable in most cases. Awareness of the clinical data will help nurses identify patients eligible for adjuvant trastuzumab, familiarize them with treatment and cardiac monitoring plans, and provide them with information to help advise, treat, and support patients from diagnosis through completion of therapy.

**B**reast cancer is the most frequently diagnosed cancer in women in the United States (Jemal et al., 2009). Among women, breast cancer was estimated to account for 27% of all new cancer cases in the United States and was expected to cause 40,170 deaths in 2009 (Jemal et al., 2009). The chances of survival are increased with early diagnosis and treatment.

### Evolution of Adjuvant Therapy

Systemic adjuvant therapy is administered following surgery because it reduces the risk of disease recurrence and metastasis and increases survival, particularly among patients with node-positive disease who are at high risk for recurrence. In the United States throughout the 1970s and 1980s, the cytotoxic chemotherapy regimen of cyclophosphamide, methotrexate, and 5-fluorouracil (CMF) was the mainstay of adjuvant therapy. Anthracyclines such as doxorubicin combined with cyclophosphamide (AC) showed substantial improvements in clinical outcome compared with CMF; anthracycline-containing regimens significantly reduced the risk of disease recurrence by 12% and risk of death by 11% and became the standard of care in the 1990s (Early Breast Cancer Trialists' Collaborative Group, 1998a). In the early 2000s, the addition of paclitaxel to standard AC provided more improvements, reducing risk of recurrence by 17% and risk of death by 18% at five years; disease-free survival at this time point was 70% versus 65%, and overall survival was 80% for AC plus paclitaxel versus 77% for AC alone (Hen-

### At a Glance

- ◆ Nurses are crucial for educating and supporting patients throughout the treatment period to ensure that patients derive the maximum benefit from adjuvant trastuzumab therapy.
- ◆ Monitoring cardiac function before, during, and after trastuzumab-based adjuvant treatment is important.
- ◆ Nursing intervention can lead to increased individual adaptation to the psychosocial effects that occur during all phases of breast cancer diagnosis, treatment, and survivorship.

derson et al., 2003). More recent progress in chemotherapy has included the use of another taxane, docetaxel, and dose-dense therapy regimens.

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