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# Treating Metastatic Breast Cancer With Systemic Chemotherapies: Current Trends and Future Perspectives

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Treatment selection for metastatic breast cancer (MBC) is guided by multiple factors, most importantly hormone receptor (HR) or HER2 expression, treatment history, and prognostic factors such as short disease-free interval, presence of visceral metastases, performance status, and degree of symptoms. Chemotherapy is indicated as initial therapy for patients with HR-negative disease and following failure of hormonal therapies in HR-positive disease. Patients treated with an anthracycline or a taxane in early-stage settings may no longer be candidates for those drugs in MBC, thus underscoring the need for alternative options. Sequential single-agent therapy or combination therapy are viable strategies. Trials have shown that ixabepilone plus capecitabine significantly improves progression-free survival compared with capecitabine

alone in anthracycline- or taxane-pretreated or -resistant patients, and single-agent eribulin improves survival compared with the physician's choice of treatment in patients treated previously with at least two regimens for MBC. Regardless of the regimen, proactive management to detect treatment-related adverse events in a timely manner remains important for ensuring effective delivery of treatment. Many promising investigational agents are in development, including T-DM1 (trastuzumab emtansine) and pertuzumab for HER2-positive disease, as well as PARP-1 (poly[adenosine diphosphate ribose] polymerase-1) inhibitors and cetuximab for triple-negative disease. In addition, new options for the treatment of MBC following failure of an anthracycline and a taxane promise to improve patient outcomes. Nurses should remain vigilant for adverse events and remember that the goal of treatment remains control of the disease and palliation.

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**B**reast cancer is the most common malignancy and the second leading cause of cancer-related death among women in the United States, with an estimated 226,870 new cases diagnosed and 39,510 deaths occurring in 2012 (Siegel, Naishadham, & Jemal, 2012).

About 5% of cases are diagnosed after the disease already has metastasized (Surveillance Epidemiology and End Results, 2012), and disease recurrence from early stage to distant sites is common. With the development of metastatic breast cancer (MBC), systemic treatment prolongs survival and enhances quality of life, but is not curative (National Comprehensive Cancer Network [NCCN], 2011). This article reviews current treatment strategies and trends in MBC and discusses several agents in clinical development. For all treatments discussed, nurses should remember that when patients fail to derive even a minor response from

three sequential regimens or performance status is 3 or higher on a scale from 0–5 (higher scores indicate deteriorating performance), treatment should be changed to supportive care only (NCCN, 2011).

## Current Treatment Options

The most important factors guiding the choice of initial therapy for MBC are hormone receptor (HR) and HER2 status, as well as prior treatments in early-stage disease (see Figure 1).

### Hormonal Therapy

Hormonal therapy—either an aromatase inhibitor (anastrozole, letrozole, and exemestane) or an antiestrogen (tamoxifen)—