Managing Patients With Advanced and Metastatic Breast Cancer: Taxanes and Epothilones

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Breast cancer is one of the most common cancers in women, and although the prognosis is good for patients with early-stage, localized disease, it is relatively poor for patients with metastatic breast cancer. Treatment options become progressively limited with advancing lines of therapy, primarily because of the development of tumor drug resistance. Nurses have a crucial role in managing patients with breast cancer; therefore, awareness of the clinical efficacy and side-effect profiles of traditional and newer treatment options is of great importance. The taxanes (docetaxel and paclitaxel) are well known for their efficacy in patients with breast cancer. The epothilones, a newer class of microtubule-targeting agents, are also shown to be proving beneficial. The most clinically advanced epothilone, ixabepilone, has been approved for the treatment of locally advanced or metastatic disease. Although taxanes and epothilones are similar mechanistically, the epothilones have unique structural, binding, and preclinical properties in terms of microtubule stabilization. Importantly, ixabepilone retains clinical efficacy in patients with metastatic breast cancer who show resistance to taxanes and anthracyclines.

At a Glance

- Taxanes and epothilones are highly effective microtubule-targeting agents indicated in anthracycline-resistant metastatic breast cancer.
- Taxanes and epothilones are in unrelated drug classes and differ with respect to clinical efficacy, adverse events, and administration protocol.
- Awareness of similarities and differences between taxanes and epothilones will aid in effective nursing care of patients with metastatic breast cancer receiving the agents.

...disease who are refractory to hormone receptor drug therapy also may benefit from taxane-based chemotherapy.

...Advances in chemotherapy treatment options have improved patient outcomes; as such, the breast cancer treatment landscape is evolving continually. The introduction of the epothilone ixabepilone (Ixempra®, Bristol-Myers Squibb), which was approved by the U.S. Food and Drug Administration (FDA) for

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