Metastatic Breast Cancer:
The Individualization of Therapy

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The goals of breast cancer therapy are to reduce the risk of disease recurrence, minimize toxicity, and improve overall survival. Recent advances in research of the biology of breast cancer tumors have resulted in more targeted therapies. The therapies can increase survival and help maintain the quantity and quality of life for patients with metastatic breast cancer. The targeted therapies for breast cancers that are HER2 positive are presented, including the indications and expected benefits for patients and implications for nurses involved in the care of such patients. Emerging research in triple-negative breast cancer also is discussed.

In 2000, the American Cancer Society (ACS) estimated a 21% long-term survival rate (10 years or longer) for metastatic breast cancer (MBC). The current long-term survival rate is an estimated 27% (ACS, 2008). Several factors have contributed to the modest but steady gain in long-term survival (ACS, 2007). Part of the progress is attributable to the recognition that breast cancer is not a single disease—it has many subtypes and each can require different treatment (Burstein, Paik, Ravdin, & Albain, 2006). The improvement in MBC long-term survival is the result of the use of pathologic information and biomarkers to individualize care and the development of new treatment agents.

The purpose and results of breast cancer pathology should be discussed with patients. Nurses can help their patients understand why specific tests are ordered and how their results will impact treatment decisions. A pathology report provides information about features of a tumor that might predict a response to a particular therapy and prognosis (see Table 1). The information is an important step in individualizing therapy.

The systemic treatment of breast cancer has advanced toward a more targeted approach, which is aimed at specific molecular targets, rather than treatment with relatively nonspecific cytotoxic chemotherapy or hormonal therapy. Theoretically, this will minimize treatment risks and side effects and optimize benefits, particularly quality of life and overall survival. The goal is to perfect the approach so that each patient receives therapy targeted at her specific breast cancer subtype. Patient resources for information on MBC, including targeted therapy, are shown in Figure 1.

This article describes the biomarkers that individualize MBC therapy and provides an overview of two targeted agents, trastuzumab and lapatinib, which often are used in the treatment of MBC. Information about triple-negative breast cancer also is provided in this article.

At a Glance

- The goal of targeted therapy is to provide optimal treatment for specific breast cancer subtypes based on biologic characteristics of the tumor.
- Women with HER2-positive breast cancer may benefit from treatment with trastuzumab or lapatinib.
- Research is under way into treatment for triple-negative breast cancer—estrogen receptor negative, progesterone receptor negative, and HER2 negative.

Considerations for Individualizing Therapy

To optimize treatment for any cancer, the ability to predict how a patient will respond to a given therapy is invaluable. Pathology results, previous treatments, and medical history can provide information that is an important component in developing an effective, individualized treatment plan.

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