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# Treating Hot Flashes in Breast Cancer Survivors: A Review of Alternative Treatments to Hormone Replacement Therapy

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**B**reast cancer is the most common cancer diagnosis among U.S. women (Jemal et al., 2003), and an estimated 2.5 million survivors of breast cancer currently are living in the United States (Hormone Foundation, 2003). The average woman has a 12.6% lifetime risk of developing breast cancer and a 3.6% risk of dying from the disease (Burstein & Winer, 2000). These statistics suggest that most women diagnosed with breast cancer do not die from the disease, resulting in a significant number of survivors who experience psychological and physical side effects related to diagnosis and treatment.

With a growing number of breast cancer survivors, factors associated with this population's quality of life recently have received attention (Ganz et al., 2000). Hot flashes, the most prevalent menopause-related symptom, significantly decrease quality of life (Stearns & Hayes, 2002). Hot flashes are especially problematic in breast cancer survivors because this population often is diagnosed around the time of natural menopause or because acute menopause occurs as a result of chemotherapy treatment (Goodwin, Ennis, Pritchard, Trudeau, & Hood, 1999).

Given the controversial evidence of an association between hormone replacement therapy (HRT) and breast cancer, many women face difficult treatment decisions re-

As the number of breast cancer survivors continues to grow, factors associated with quality of life are receiving increased clinical and research attention. This attention is imperative given the aftermath of psychological and physiologic side effects that commonly result from a cancer diagnosis and cancer-related treatments, including menopausal symptoms. Hot flashes, the most prevalent of these symptoms, have been shown to significantly decrease quality of life in women. Although manageable with hormone replacement therapy (HRT), hot flashes often are especially problematic in breast cancer survivors, a population that typically is not treated with HRT because of controversial evidence of a relationship among estrogen and/or progesterone and breast cancer recurrence and mortality. Furthermore, hot flashes commonly are more severe in premenopausal women who experience acute menopause as a result of chemotherapy treatment. In recent years, several treatment alternatives to HRT have been investigated. Given the significant number of women affected by breast cancer and the negative impact that hot flashes can have on their quality of life, this article reviews alternatives to HRT for reducing hot flash symptoms in breast cancer survivors.

**Key Words:** breast neoplasms, hot flashes, alternative therapies

garding the safest and most effective way to control menopausal symptoms. Recently, a series of empirical studies investigated the effectiveness of HRT alternatives in controlling hot flashes. This article reviews these alternative treatments.

## Menopause

Menopause is defined clinically as the permanent cessation of menses for at least 12 months (Derry, Gallant, & Woods, 1997). During the years prior to menopause, estrogen and progesterone steadily decrease, which can result in a number of adverse menopause-related symptoms, including hot flashes (Klock, 2000).

HRT, which refers to non-contraceptive hormone treatment with estrogen or estrogen in combination with progestin, is currently the most prevalent and effective treatment for women experiencing hot flashes and other menopausal symptoms (Klock, 2000; Pritchard, 2001). However, for women at high risk for developing breast cancer or women who are breast cancer survivors, HRT typically is not available as a treatment option because of controversial evidence about the relationship among estrogen and/or progesterone and breast cancer onset, recurrence, and mortality (Collaborative Group on Hormonal Factors in Breast Cancer, 1997; O'Meara et al., 2001; Ursin et al., 2002; Vikas & Sood, 2001).

Furthermore, recent findings, such as those

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