Hot Flashes May Indicate Response to Tamoxifen

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Contributing Writer

CHICAGO — Hot flashes may be an indicator of the efficacy of adjuvant tamoxifen therapy in women who have completed breast cancer treatment, a new study suggests.

Data from a large prospective trial of breast cancer survivors on tamoxifen therapy show that women who experienced hot flashes had fewer breast cancer events than those who did not report hot flashes, according to Dr. Joanne E. Mortimer and colleagues at the University of California, San Diego's Moores Cancer Center in La Jolla.

"Our data suggest a relationship between side effects and efficacy of adjuvant tamoxifen," Dr. Mortimer said at the annual meeting of the American Society of Clinical Oncology.

The study population was drawn from an ongoing study in 3,088 women, aged 18-70 years, with a history of breast cancer stage I (T1c)-III, who were randomly assigned to either the Women's Healthy Eating and Living (WHEL) Study diet or the National Cancer Institute (NCI)–based diet.

The NCI-based diet group, consisting of 1,551 women, formed the basis of the tamoxifen/hot flash study. Of these, 637 women were not taking an antiestrogen agent, 1 woman was taking anastrozole, 16 women were taking raloxifene, and data on vasomotor symptoms were not available in 33 women. A total of 864 women were on tamoxifen.

Among the participants taking tamoxifen, 674 reported experiencing hot flashes (78%) and 190 did not (22%). The mean age was 54 years in both groups. There was no significant difference in stage at diagnosis or hormone receptor status between women who reported hot flashes and those who did not. Time between diagnosis and study entry was statistically shorter in women reporting hot flashes.

With 7.3 years of follow-up, 127 women have developed recurrent disease or second primary tumors, said Dr. Mortimer, professor of clinical medicine and deputy director of clinical oncology at the Moores Cancer Center.

Women with hot flashes had significantly fewer breast cancer–specific events than women without hot flashes (12.9% vs. 21%). "Hot flashes were more predictive of outcome for tamoxifen-treated patients than were age, hormone-receptor status, or stage of the initial cancer when comparing stage I to II," Dr. Mortimer stated.

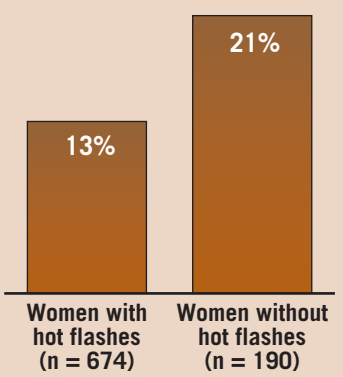
During the same session at the meeting, preliminary results of a prospective observational trial of 297 women with breast cancer show that the estrogen-receptor gene ESR1 CG haplotype was associated with higher hot flash scores at baseline in premenopausal women.

Dr. Vered Stearns and associates in the Consortium on Breast Cancer pharmacogenomics conducted genotype analyses and prospectively collected medication records and hot flash diaries before and 1, 4, 8, and 12 months after starting tamoxifen. Postmenopausal women homozygous for ESR1 Pvull CC and ESR2-02 GG genotypes had the greatest increase in hot flash scores at 4 months.

Women with the ESR2-02 AA genotype had a significantly lower risk for developing tamoxifen-induced hot flashes, compared with women with AG or GG genotypes (relative risk 0.26), said Dr. Stearns, Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University, Baltimore.

Oncologists are aware of the link between estrogen-receptor status and response to tamoxifen, but these data provide additional evidence that hot flashes and ESR gene variations may be related. ■

Breast Cancer–Specific Events In Women on Tamoxifen



Note: Based on a 7.3-year follow-up of women taking tamoxifen who completed breast cancer treatment.
Source: Dr. Mortimer

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