Raloxifene and Breast Cancer: The Influence of Estradiol

A recent study has suggested that Raloxifene may be more effective in preventing breast cancer in women with higher levels of estradiol. It has previously been shown that the risk for breast cancer increases with increased endogenous estradiol. Scientists hypothesized that raloxifene, which competes with estradiol for binding to estrogen receptors in breast tissue, might have a greater effect on breast cancer risk in women with relatively high estradiol levels. They analyzed data from the Multiple Outcomes of Raloxifene Evaluation (MORE) trial, conducted in 7290 women (80 or younger) with osteoporosis. Serum estradiol concentrations were measured by a central lab. They found that in the placebo group, women with estradiol levels greater than 10 pmol/L (2.7 pg/mL) had a 6.8-fold higher rate of breast cancer than did women with undetectable estradiol levels. Women with estradiol levels greater than 10 pmol/L in the raloxifene group had a rate of breast cancer that was 76% lower when compared to that of women in the placebo group with similar levels of estradiol. In contrast, women with undetectable levels of estradiol had similar breast cancer risk whether or not they were treated with raloxifene. If confirmed, this suggests that measuring estradiol and treating women with high estradiol levels could substantially reduce the rate of breast cancer among postmenopausal women.

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