Update on Breast Cancer Prevention

By Rowan T. Chlebowski, MD, PhD [2]

The "Update on Breast Cancer Prevention" by Rastogi and Vogel provides a comprehensive and balanced review of the current status of breast cancer chemoprevention. Several areas that the authors address warrant further attention.

Available Data
The authors appropriately suggest that tamoxifen has established "proof of principle" for breast cancer chemoprevention, whereas raloxifene (Evista) remains investigational despite the intriguing results of the Multiple Outcomes of Raloxifene Evaluation (MORE) trial.[1] Conclusions regarding tamoxifen use in breast cancer risk reduction are based on four randomized trials with breast cancer as the primary study end point in which a cumulative total of over 750 breast cancer cases developed.[2,3] Current views concerning raloxifene's impact on breast cancer are based on a secondary analysis of a single study, in which a total of 61 invasive breast cancers developed.[1] In addition, there is substantial evidence from randomized trials regarding tamoxifen's effectiveness in reducing contralateral breast cancer; nearly a 50% reduction in contralateral breast cancers involving over 800 cases has been seen.[4] Since raloxifene is relatively inactive against established breast cancer, there is no evidence for raloxifene's effectiveness against contralateral breast cancer. In this regard, the results of the comparative Study of Tamoxifen and Raloxifene (STAR) are highly anticipated. Despite evidence of efficacy, use of tamoxifen in the clinic for primary breast cancer prevention is extremely limited, largely due to concerns regarding endometrial cancer and vascular events (pulmonary embolus and stroke). This may well reflect an overly conservative view of the risk/benefit ratio for tamoxifen use in this setting. Recently, Freedman and colleagues,[ 5] using data from a national health interview survey, applied the risk/benefit index developed by Gail and colleagues[6] to determine the number of women who could benefit from tamoxifen chemoprevention in the United States. Of the approximately 65 million women aged 35 to 79 years, they estimated that over 10 million could potentially benefit from tamoxifen chemoprevention.

Risk Assessment Tools
It has been suggested that the development of new risk assessment tools and decision aids that incorporate mortality estimates could facilitate a clearer understanding of risk/benefit issues and lead to wider tamoxifen use.[7] As one example, Col and colleagues[8] used a Markov modeling approach to address the impact of tamoxifen on survival among women at varying levels of risk for breast and endometrial cancer and hip fracture. In their model, a 50-year-old woman without a uterus taking tamoxifen for 5 years would increase her life expectancy by 1 to 4 months, even if she was only at average breast cancer risk. These estimates incorporate the residual carryover impact of tamoxifen on breast cancer risk seen for years even after its discontinuation.[9] Further refinement continues to make such modeling approaches "clinic usable." Broader Perspective on Prevention
Finally, although the focus of Rastogi and Vogel's update was on chemoprevention, the title uses the more general term "prevention," which would include consideration of lifestyle interventions for breast cancer risk reduction. Most oncologists are familiar with the ongoing STAR chemoprevention trial comparing tamoxifen to raloxifene, but fewer may be familiar with the status of ongoing lifestyle intervention trials targeting breast cancer. For example, one component of a randomized dietary modification trial is exploring dietary fat intake reduction in more than 48,000 postmenopausal women in the Women's Health Initiative, with breast cancer as a primary study end point.[10] In addition, accrual has been completed for two randomized secondary prevention (adjuvant) trials evaluating dietary change including fat intake reduction, with over 5,000 breast cancer patients participating.[11-13] All three trials have successfully completed accrual, have reported successful maintenance of adherence, and are designed to report clinical outcomes in about 2 years. As data emerge from these ongoing chemoprevention and lifestyle intervention trials, the remaining issue will be the extent to which clinical oncologists choose to incorporate breast cancer risk reduction activities into their practice.
Disclosures: The author(s) have no significant financial interest or other relationship with the manufacturers of any products or providers of any service mentioned in this article.


Source URL: http://www.diagnosticimaging.com/review-article/update-breast-cancer-prevention-1

Links:
[1] http://www.diagnosticimaging.com/review-article