RISK FACTORS

Oncotype DX[®] assay predicts local recurrence in breast cancer

In current practice, risk assessment for locoregional recurrence (LRR) in breast cancer is based on established anatomic and histopathologic factors. In a recent study, Mamounas and colleagues used the knowledge that the presence of LRR is a significant indicator of distant recurrence to hypothesize that “genomic profiles that predict risk for distant recurrence will also predict risk for LRR.”

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The 21-gene recurrence score (RS) assay (Oncotype DX[®]) provides a validated, quantified risk of distant recurrence in patients with node-negative, estrogen receptor (ER)-positive, tamoxifen-treated breast cancer. Indeed, the guidelines from both ASCO and the National Comprehensive Cancer Network include the use of RS for the management of node-negative, ER-positive breast cancer.

“The primary objective of this study was to examine the relationship between the RS and risk of LRR in tamoxifen-treated patients” explains Mamounas, lead investigator of the study. The researchers achieved this by examining the RS and time to first LRR of 895 tamoxifen-treated patients, 355 placebo-treated patients and 424 patients who received chemotherapy and tamoxifen, all of whom had taken part in either the NSABP B-14 or NSABP B-20 trials.

A significant association between RS and LRR was observed for all cohorts,

which was dependent on the treatment. In tamoxifen-treated and mastectomy-treated patients, the association was independent of age. By contrast, the association was more complex for patients receiving radiation therapy and lumpectomy; indicating that “radiation may be more effective as RS increases.”

Mamounas noted, “Given the strong association between distant recurrence and LRR, our findings are not surprising”; however, “this is the first demonstration of such an association based on a sizable population of patients from randomized clinical trials of adjuvant therapy.” Therefore, “these results have biologic and potential clinical implications.”

Rebecca Kirk

Original article Mamounas, E. P. *et al.* Association between the 21-gene recurrence score assay and risk of locoregional recurrence in node-negative, estrogen receptor-positive breast cancer: results from NSABP B-14 and NSABP B-20. *J. Clin. Oncol.* **28**, 1677–1683 (2010)