

**[S4-9] Comparing the Prediction of Chemotherapy Benefit in Patients with Node-Negative, ER-Positive Breast Cancer Using the Recurrence Score and a New Measure That Integrates Clinical and Pathologic Factors with the Recurrence Score.**

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Background: The 21-gene *Oncotype DX*<sup>®</sup> Recurrence Score<sup>®</sup> (RS) is widely used for assessment of recurrence risk and prediction of chemotherapy benefit in patients with early stage ER-positive breast cancer. Through a meta-analysis on the NSABP B-14 study and the ATAC study, the Recurrence Score-Pathology-Clinical (RSPC) risk assessment has been developed as an integration of RS and clinico-pathologic factors (including tumor size, tumor grade and age) for assessment of recurrence risk in early stage ER-positive, node-negative breast cancer. The value of RSPC in prediction of chemotherapy benefit needs to be evaluated.

Methods: In the NSABP trial B-20, patients were node-negative and ER-positive by the ligand binding assay, and were randomized to tamoxifen with or without adjuvant chemotherapy (MF or CMF). B-20 patients who had successful *Oncotype DX* RS assay and ER score  $\geq 6.5$  were included in this study. Cox proportional hazards models with interaction terms were used to evaluate RS and RSPC in prediction of chemotherapy benefit in reducing risk of distant recurrence.

Results: The analysis included 625 patients among whom 60 distant recurrence events occurred. RS showed a significant interaction with chemotherapy treatment ( $p=0.037$ ), as found previously, with a standardized hazard ratio (HR) of 0.836. The interaction of RSPC with treatment was not significant ( $p=0.10$ ), although the trend was in the same direction as RS (standardized HR 0.833).

Conclusions: RS used alone remains the best predictor of chemotherapy benefit in ER-positive, node-negative breast cancer.