

30th Annual San Antonio Breast Cancer Symposium -- Abstract #63

Prognostic utility of the 21-gene assay compared with Adjuvant! in hormone receptor (HR) positive operable breast cancer with 0-3 positive axillary nodes treated with adjuvant chemohormonal therapy (CHT): an analysis of intergroup trial E2197.

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Background: Although previous reports have compared multigene markers to clinical features in multivariate models, there is little information about the utility of such markers in the context of validated instruments incorporating clinical features and treatment interventions such as Adjuvant!.

Methods: A sample of 465 patients (pts) with HR-positive disease from E2197 who did (N=99) or did not have a recurrence after CHT and had available tissue had an Oncotype DX Recurrence Score (RS) assay, and also had recurrence risk estimated by Adjuvant! E2197 included 2885 evaluable pts with 0-3 positive nodes treated with four 3-week cycles of doxorubicin (60 mg/m²) plus cyclophosphamide 600 mg/m² (AC) or docetaxel 60 mg/m² (AT) and tamoxifen. Median follow-up was 76 months. Tumor grade, HR expression, and Her2 expression were determined centrally. Five-year recurrence estimates were computed by Adjuvant! with a batch processor (using central grade), and pts were classified as "low", "intermediate", or "high" Adjuvant! risk similar in proportion to the standard RS risk groups. The prognostic utility of RS was evaluated in each Adjuvant! risk group.

Results: Similar to node-negative disease, 46% had low (< 18), 30% had intermediate(18-30), and 24% had a high RS (\geq 31). RS was a highly significant predictor of recurrence (local and distant), including node-negative (P = 0.0007) and positive (P=0.0004) disease. Low RS predicted low recurrence (\leq 5%) irrespective of nodal status. RS provided additional information to Adjuvant! (see table); more detailed analyses comparing the prognostic utility of Adjuvant! and RS will be presented.

Conclusions: Oncotype DX RS provides additional prognostic information in HR-positive operable breast cancer treated with adjuvant CHT when outcome is modeled by Adjuvant!, particularly in those projected by Adjuvant! to have better outcomes. Although both Adjuvant! and Oncotype DX have been prospectively validated for 10 year outcomes (including only node-negative tam-treated pts for the latter), this analysis demonstrates that multigene signatures provide additional prognostic information to clinical variables in this population treated with CHT.

Odds Ratio for Recurrence by Oncotype DX RS in Adjuvant ! Risk Groups

	Adjuvant! Low (N=202)	Adjuvant! Int. (N=138)	Adjuvant! High (N=125)
RS Ratio: Inter/ Low	2.55 (1.11,5.85) P=0.03	9.37 (3.01,29.2) P<0.001	0.89 (0.3,2.63) P=0.83
RS Ratio: High/ Low	4.00 (1.73, 9.25) P=0.001	5.78 (1.7,19.6) P=0.004	2.62 (1.05,6.51) P=0.04

Odds ratio for recurrence (95% confidence intervals)