

## P264 Predicting late distant recurrence risk in ER+ breast cancer after five years of tamoxifen

### Poster Abstracts II

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**Goals:** Identification of molecular determinants predicting late recurrence (>5 yrs) in stage I and II breast cancer has become clinically important in light of data demonstrating a benefit for 10 yrs of tamoxifen administration. Since the 21-gene Recurrence Score (RS) is commonly utilized in early stage BC, we wished to determine its utility in predicting distant recurrences beyond 5 yrs as a function of quantitative ER expression.

**Methods:** The 21-gene RS was assessed in 1065 chemo and tam-treated, ER+, node-positive pts from NSABP B-28 and 668 tam-treated, ER+, node-negative pts from NSABP B-14. Cox PH models, KM estimates and log rank statistics were used to assess the association of the RS with risk of DR by quantitative ER expression, using the 21-gene assay, in pts event-free after 5 yrs. We established an ER cut-point (high vs low) in B-28, and tested the cut-point in B-14, formally evaluating the interaction of RS and ER.

**Results:** Median follow-up was 11.2 yrs (B-28) and 14.5 yrs (B-14). 832 B-28 pts and 564 B-14 pts were DR-free after 5 yrs. A reference normalized ER cut-point of 9.1  $C_T$  was established in B-28 based on the association of the RS with DR after 5 yrs. Of the event-free pts at 5 yrs, 68% in B-28 and 88% in B-14 had ER >9.1. In B-28 the RS result was strongly associated with DR after 5 yrs in the higher ER expressing pts (log rank  $P=0.001$ ), but not in the lower ER expressing pts (log rank  $P=0.87$ ). It was confirmed in the B-14 data that RS was associated with DR after 5 yrs in higher ER pts (Table) but not in the lower ER pts (interaction  $P=0.03$ ). The association of RS risk groups within clinicopathologic subgroups for the higher ER patients still at risk at 5 years will also be presented.

Table: DR Risk after 5 yrs in B-14 by RS Risk Group for pts with ER >9.1  $C_T$  RS risk group