Abstract #1: Prognostic impact of the 21-gene recurrence score (RS) on disease-free and overall survival of node-positive, ER-positive breast cancer patients (pts) treated with adjuvant chemotherapy: Results from NSABP B-28.

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Background: RS predicts outcome in node- and node+, ER+ pts treated with adjuvant endocrine therapy as well as benefit from adjuvant chemotherapy, with high RS receiving most of the benefit. We studied the prognostic impact of RS in node+, ER+ pts treated with adjuvant chemotherapy plus endocrine therapy as part of the NSABP B-28 trial. **Methods:** B-28 compared doxorubicin/cyclophosphamide (ACX4) with ACX4 followed by paclitaxel X4. Pts >50 yrs and those<50 yrs with ER+ and/or PR+ tumors also received 5 yrs of tamoxifen concurrently with chemotherapy. Between 8/95 and 5/98 3060 pts were accrued. The present study includes 1,065 pts ER+ by central tissue microarray IHC assay, tamoxifen treated, assessed by RS. Median follow-up time was 11.2 yrs. **Results:** Of the 1,065 pts, 386 (36%) had low RS<18; 364 (34%) intermediate RS,18-30; and 315 (30%) high RS≥31. In univariate analyses RS was a significant predictor of DFS, distant recurrence-free interval (DRFI) and OS (Table). In multivariate analyses, RS provided independent prognostic information for all three endpoints beyond clinical and pathologic factors, e.g., treatment, age, tumor size, tumor grade, number of + nodes and type of surgery (p<0.001). **Conclusions:** The 21-gene RS maintains significant prognostic impact in ER+, node+ pts who have received anthracycline- or anthracycline/taxane-based adjuvant chemotherapy. These findings emphasize the need to target pts with high residual risk for recurrence with additional therapies to overcome unfavorable biology, potential endocrine and/or chemotherapy resistance. Supported by: NCI, HHS, PHS, grants U10-CA-12027, -69651, -37377, -69974, and U24-CA-114732, and grants from Susan G. Komen for the Cure and Bristol-Myers Squibb Pharmaceutical Research Institute.

Kaplan-Meier estimates of 10-yr DFS, DRFI, and OS.

Endpoints	RS low n = 386	RS intermed n = 364	RS high n = 315	Log-rank p value
DFS %; 95%CI	75.8 (71.1-79.8)	57.0 (51.6-61.9)	48.0 (42.3-53.4)	p<0.001
DRFI %; 95%CI	80.9 (76.4-84.6)	64.9 (59.6-69.7)	55.8 (50.0-61.2)	p<0.001
OS %; 95%CI	90.0 (86.4-92.6)	74.7 (69.8-78.9)	63.0 (57.4-68.2)	p<0.001