

Evaluation of Recurrence Score and traditional clinicopathologic assessments in a large ER-positive, lymph node-negative patient cohort.

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ER+

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Abstract Disclosures

Abstract:

Background: The Recurrence Score (RS) assay provides prognostic and predictive information for estrogen receptor positive (ER+) breast cancer. In a large cohort of ER+, HER2-, lymph node negative (LN-) patients (pts), the distribution of RS and RS groups, within categories of age, tumor size, grade, and joint categories (e.g., size versus grade) were examined.

Methods: 2,097 pts from Clalit Health Services and 484 from Maccabi Health Services in Tel Aviv, Israel, had RS assay ordered between 1/2008 and 6/2010. 1864 were LN-, ER+, HER2- (LN- grade 3 tumors of MHS pts required to be < 2 cm). Pt age, tumor size and grade were obtained for 100%, 99% and 82% of cases. Distributions of RS were compared among categories of the clinicopathologic factors and Spearman correlation coefficients (and 95% confidence intervals) were calculated to assess the association between them.

Results: 99.3% were female. Age distributions were: 23-40yo, 3.2%; 40-49yo, 16.5%; 50 - 59yo, 30.4%; 60-69yo, 32.8%; 70-85yo, 17.1%. Tumor sizes were: <1 cm, 12.5%; 1-2cm, 65.8%; >2-3cm, 17.3%; >3cm, 4.5%. By grade: 1, 18.1%; 2, 63%; 3, 18.9%. 79.7% were ductal and 12.5% lobular. 81.9% were IHC PR+. Spearman cc's (and 95% CI) for continuous RS with standard metrics: age, -0.09 (-0.13,-0.04); tumor size (cm), 0.07 (0.02,0.12); tumor grade, 0.33 (0.28,0.37). Pts <50 yo, 14.2% had high RS; ≥50 yo 10.3% had high RS. In tumors ≤2 cm, 16% had high RS; > 2 cm 30.7% had high RS. 1.4% of grade 1 tumors had high RS and 30.7% had intermediate RS while 22.8 % of

grade 3 tumors had low RS. 7.5% of PR+ tumors had high RS and 20.1% of PR- tumors had low RS. Joint categories will be presented. Conclusions: There is a range of RS biology across pt age, tumor size, grade. The RS can't be predicted by clinicopathologic variables.

Characteristic	Value	Low (RS<18)	Int (RS 18-30)	High (RS≥31)
Age (years)	<50	177 (48.2%)	138 (37.6%)	52 (14.2%)
	≥50	763 (51.0%)	580 (38.7%)	154 (10.3%)
Tumor size (cm)	≤2	247 (20.3%)	775 (63.7%)	194 (16.0%)
	>2	29 (9.5%)	183 (59.8%)	94 (30.7%)
Tumor grade	1	188 (67.9%)	85 (30.7%)	4 (1.4%)
	2	507 (52.6%)	366 (38.0%)	91 (9.4%)
	3	66 (22.8%)	132 (45.7%)	91 (31.5%)
PR by IHC	Neg	67 (20.1%)	176 (52.9%)	90 (27.0%)
	Pos	860 (57.1%)	533 (35.4%)	113 (7.5%)