

[P2-07-01] Association of TILs with clinical parameters, recurrence score, and prognosis in patients with early HER2-negative breast cancer (BC) – A translational analysis of the prospective WSG planB trial

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Introduction:

Tumor-infiltrating lymphocytes (TILs) have been associated with prognosis and with chemotherapy response among patients with BC, particularly in presence of high-risk features. The WSG planB trial randomized 2448 patients with HER2- NO/1 BC for comparison of anthracycline-free (6xTC) vs. standard anthracycline-taxane chemotherapy (4xEC-4xDoc). Recurrence Score® (RS) was incorporated for risk stratification in hormone receptor positive (HR+) BC. The present analysis focuses on the correlation of TILs with clinical/pathological parameters and their prognostic impact among planB patients.

Methods:

Stromal TILs were evaluated using a pathologist and two-observer approach. Three independent observers evaluated digital sections on H&E staining as previously suggested (Salgado et al., Ann Oncol. 2014); the median of the three values (TILmed) was used for statistical analysis. Spearman correlations of TILmed with clinical/pathological parameters (including central Ki67 expression, quantitative ER measurements, nodal involvement, and RS) and univariate impact on event-free survival (EFS) were analyzed.

Results:

Our analysis included 300 patients with HR- and 1124 patients with HR+ HER2- BC. Both in HR- and HR+ BC, a significant association between TILmed and (i) central grading (correlation coefficient $r=0.147$, $p=0.012$ and $r=0.195$, $p<0.001$, respectively) and (ii) central Ki67 expression ($r=0.202$, $p=0.001$ and $r=0.152$ and $p<0.001$) was observed. Among HR+ cases, a significant association between TILmed and quantitative ER measurements ($r=-0.412$, $p=0.041$) and RS ($r=0.190$, $p<0.001$) was found. Furthermore, univariate Cox analysis revealed a significant association between TILmed (coded as fractional rank) and event-free survival (EFS). The hazard ratio of 75th to 25th percentile was 1.58 (95%CI: 1.06-2.36, $p=0.025$). This impact was not separately significant in HR subgroups due to lack of events

Conclusion:

In this dataset, presence of stromal TILs was moderately associated with clinical features of high-risk breast cancer (including RS) and decreased EFS. TILs will be evaluated as a prognostic or predictive factor (in multivariate and subgroup analyses) when the outcome results are evaluated after prolonged follow up. Furthermore, an updated analysis including the complete planB dataset will be presented.

Thursday, December 10, 2015 7:30 AM

Poster Session 2: Prognostic and Predictive Factors: Prognostic Factors -- Preclinical (7:30 AM-9:00 AM)

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