

Prospective comparison of Recurrence Score, uPA/PAI-1, central grade and molecular classification in early breast cancer: Interim results from the WSG-Plan B trial.

Sub-category:

Molecular Diagnostics and Staging

Category:

Tumor Biology

Meeting:

2011 ASCO Annual Meeting

Abstract No:

10594

Citation:

J Clin Oncol 29: 2011 (suppl; abstr 10594)

Author(s): T. Degenhardt, O. Gluz, H. H. Kreipe, R. E. Kates, C. Liedtke, S. Shak, M. R. Clemens, D. Augustin, U. Nitz, N. Harbeck, on behalf of the Plan B investigators; University Hospital Cologne, Cologne, Germany; West German Study Group and Evangelical Hospital Bethesda, Wuppertal, Germany; Hannover Medical School, Hannover, Germany; REK Consulting, Otterfing, Germany; West German Study Group and University of Muenster, Muenster, Germany; Genomic Health, Redwood City, CA; Klinikum Mutterhaus, Trier, Germany; Klinikum Deggendorf, Deggendorf, Germany; West German Study Group and Evangelical Hospital Bethesda, Moenchengladbach, Germany; West German Study Group and University of Cologne, Cologne, Germany

Abstract Disclosures

Abstract:

Background: Both the recurrence score (RS) multi-gene assay and invasion factors uPA/PAI-1 are included in guidelines (ASCO, AGO) for decision support regarding adjuvant chemotherapy in early breast cancer (BC). Here we present the first preplanned WSG-Plan B trial correlation analysis of RS, uPA/PAI-1, and molecular subtypes by protein expression.

Methods: Plan B trial (n=2,448) is evaluating anthracycline-free adjuvant chemotherapy (6x TC) vs. 4xEC-4xDOC in HER2-negative BC. RS is used as selection criterion for chemotherapy or hormonal therapy alone; uPA/PAI-1 (by ELISA) is obtained as an optional risk factor. Central and Ki-67-modified grade and luminal B subtype (by 13.25% or 20% KI-67 cut-offs) evaluation are performed by the independent trial pathologist.

Results: From April 2009 to February 2011, 2380 patients have been recruited and 1806 randomized to the study. In 1106 pts, both RS and central grade, in 592, both Ki-67 and RS, and in 201 uPA/PAI-1 and RS were available. When considered as continuous variables, RS was weakly positively correlated (Spearman's coefficient

rs) with PAI-1 ($r_s=0.21$, $p=0.003$), Ki-67 ($r_s=0.336$, $p<0.001$), and central grade ($r_s=0.498$, $p<0.001$). When considered as risk categories, there was only a weak concordance between RS and uPA/PAI-1, using either standard RS (18; 30) or PlanB cut-offs (low risk <11 RS), with 67% of patients having high uPA/PAI-1 within the low/intermediate-RS subgroups. 29-33% of G3 tumors are allocated to the RS low-risk group. While RS high-risk was predictive of high risk by uPA/PAI-1, grade and luminal B subtype, the converse was not true; clinically relevant proportions (between 33-66%) of patients identified by uPA/PAI-1 and Ki-67 as being at high risk have low/intermediate RS. Conclusions: For the first time, risk groups according to RS, Ki-67 and uPA/PAI-1 have been prospectively compared. These preliminary data show that the high RS group seems predictive of high uPA/PAI-1, aggressive central grade and luminal B subtype, but the converse is not true; these markers do not predict the RS. Further evaluation within the Plan B trial will clarify the clinical significance of these findings.