Recurrence Score Result Distributions in Stage II Colon Cancers of African American (AA) and Caucasian (CA) Patients.

2015 Gastrointestinal Cancers Symposium

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Background: The 12-gene colon cancer assay (Onco*type* DX) can identify groups of stage II colon cancer patients with lower or higher recurrence risk, but distribution of scores based on race/ethnicity has not been assessed. This study compared the distribution of Recurrence Score results and gene expression profiles between African American (AA) and Caucasian (CA) stage II colon cancer patients. **Methods:** Stage II colon cancer patients were identified from tumor registry data from four institutions: University of Arkansas for Medical Sciences, Little Rock; Veterans Administration Medical Center, Little Rock; Baptist Medical Center, Memphis, and University of Alabama at Birmingham. The 12-gene assay and mismatch repair (MMR) status were performed on formalin-fixed paraffin-embedded tissues by Genomic Health (Redwood City, CA). T-test and Wilcoxon test were used to compare data from the two groups (SAS Enterprise Guide 5.1). **Results:** Of the 244 subjects, there were 118 women (63 AA, 55 CA) and 126 men (59 AA, 67 CA). Median ages (years) were 66 for AAs and 68 for CAs. Age, gender, surgery year, pathologic T-Stage, tumor location, number of nodes examined, lympho-vascular invasion, and MMR status were not significantly different between groups ($p>0.05$). Recurrence Score results between AAs (mean 27.9; SD 12.8) and CAs (mean 28.1; SD 11.8) were not statistically different ($p>0.05$). The proportion of patients with high Recurrence Score values (≥41) was similar between the groups (17/122 AA; 15/122 CA). None of the gene expression variables, either single genes or gene groups, (cell cycle group, stromal group, BGN1, FAP, INHBA1, Ki67, MYBL2, cMYC3 and GADD45B) was significantly different between the racial groups ($p>0.05$). After controlling for clinical and pathologic covariates, means and distributions of Recurrence Score and gene expression profiles still showed no statistical significance between racial groups ($p>0.05$). **Conclusions:** In a cohort of AA and CA stage II colon cancer patients with similar clinical characteristics, the distribution of Recurrence Score results and gene expression data were similar between AA and CA patients.