Associations Between Oncogenic Risk Markers and Clinical Outcomes among Black and White Colorectal Cancer Patients

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Introduction: Blacks have a 25% higher incidence of colorectal cancer compared to their white societal counterparts. Additionally, the overall mortality rate among black colorectal cancer patients is 50% higher than that of whites. However, little is known about the biomarkers prevalent among blacks and their possible correlation to treatment response and patient outcomes.

Objective: The objective of this study is to explore disease trends that may unveil a correlation between molecular markers and poor clinical outcomes among black colorectal cancer patients.

Methods: De-identified patient data was obtained from The Oncology Data Services Department (Cancer Registry) of TJUH. The population cohort included newly diagnosed colorectal cancer patients treated at TJUH from 2000-2019, and included information regarding patient race, sex, age at presentation, stage at presentation, histological code, tumor markers: KRAS, NRAS, BRAF, MS1, treatment received, surgical findings: tumor size, lymph node involvement, presence of distant metastases at first surgery, response to chemotherapy & disease-free survival.

Results: Preliminary data on the analyzed population demonstrates that biomarker profiles did not correlate with patient race. Therefore, racial disparities seen among colorectal cancer patients cannot be attributed to these findings.
Conclusion: Biomarker trends among newly diagnosed colorectal cancer patients at TJUH do not correlate with racial identity. Additional data is needed regarding possible etiologies for the comparatively higher incidence and mortality rates among black colorectal cancer patients. Health professionals should continue to explore possible etiologies for this racial disparity in future studies.