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“Racial Disparity in COVID-19 Severity in Prostate Cancer Patients”

BACKGROUND: Past research has shown that African American cancer patients with COVID-19 have had higher hospitalization rates when compared to their Caucasian counterparts. Our study focuses on COVID-19 hospitalization rates in patients with prostate cancer. Statistics have shown that African American men are 50% more likely to develop prostate cancer in their lifetime and twice as likely to die from prostate cancer versus Caucasian men. Thus, one speculation is that racial differences in COVID-19 severity among prostate cancer patients are attributable to African American men having a higher prevalence of prostate cancer and greater risk of severe outcome. This study aimed to assess the impact of existing prostate cancer diagnosis on the racial differences in hospitalization COVID-19 cancer patients in Louisiana.

METHODS: We linked prostate cancer cases diagnosed in 2015-2019 from the Louisiana Tumor Registry (LTR) with the statewide COVID-19 data to identify COVID-19 patients who had been previously diagnosed with prostate cancer. Age and census tract level poverty were collected at the time of COVID-19 diagnosis. Bivariate and multivariable logistic regressions were used to examine the association of race with hospitalization after adjusting for socio-demographic and prostate cancer. The multivariable Poisson model was used to assess the association of race with COVID-19 hospitalization.

RESULTS: Of 1,068 COVID-19 prostate cancer patients, 60.6% were African American and 39.4% Caucasian. African American men with prostate cancer were more likely ($P < 0.05$) to be hospitalized with COVID-19. The odds of hospitalization was more than 2x higher among African American patients compared with Caucasian patients. After adjusting for age, gender, poverty, obesity, smoking status, and chronic illnesses, the odds of hospitalization were still higher for AA than white patients (OR=2.673; 95% CI: 1.88-3.79).

CONCLUSION: Sociodemographic factors and chronic illnesses are associated with the severity of COVID-19 among prostate cancer patients. We have seen that African American COVID-19 prostate cancer patients have significantly higher odds of hospitalization and longer hospital stays even when controlling these factors. More research is warranted to determine underlying factors of the observed racial disparities.