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INCIDENCE OF PROSTATE CANCER STRATIFIED BY RACE AND GLEASON SCORE: A SEER DATABASE ANALYSIS FOLLOWING USPSTF SCREENING RECOMMENDATIONS

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Introduction and objectives: In 2008 and 2012, the US Preventive Services Task Force (USPSTF) issued guidelines stating there was insufficient evidence to support prostate cancer screening. Using the Surveillance, Epidemiology and End Result (SEER) database, we sought to determine the effect of the USPSTF recommendations on prostate cancer incidence based on Gleason score, and race.

Methods: The SEER database (SEER 18) was analyzed from 2008 to 2013. Patients were divided based on recorded race. Gleason scores were stratified as low (2–6), intermediate (7) or high (8–10). Incidence was compared between 2008 and 2013, by determining incidence rate ratio (IRR) and annual percentage change (APC). The confidence interval was set at 95%, with $p < 0.05$ as significant. Tabulation of SEER data and statistical analysis was performed using Microsoft Excel© 2010.

Results: A total of 337,504 patients diagnosed with prostate cancer between 2008 and 2013 were included in the analysis. The mean age range was 65–74 years. Majority (68.1%) patients were Caucasian, followed by 14.6% African Americans. Low Gleason score was recorded for 41.8%, followed by intermediate (36.2%), and high in 15.9% of patients. Cumulative incidence of low Gleason score over the 6 year period was noted to be highest for African American (AA) followed by Caucasian (W) at 76.2 and 52.9 per 100,000, respectively. High Gleason score was reported at 37.5 and 21.0 per 100,000 for AA and W, respectively. The IRR demonstrated significant decline in incidence across races and Gleason scores. APC significantly declined among all races for low Gleason score (–8.56 AA and –8.87 W) and intermediate Gleason score (–6.54 AA and –8.56 W). Additionally APC significantly declined for AA and Hispanic (H) patients for high Gleason score, –3.51 and –4.39, respectively. APC of incidence for high Gleason score showed no statistically significant increase or decline for Caucasians and Asian/Pacific islander (API).

Conclusion: The SEER analysis demonstrates decline in incidence of prostate cancer among all races. Notably, there was a decline noted for AA and H in high Gleason score prostate cancer rate and no change for W and API, suggesting the USPSTF recommendations have been limited in their effect on the diagnosis of aggressive prostate cancer.