

The Effect of Hospital and Physician Volume on Racial Differences in Disease Recurrence following Surgery for Prostate Cancer

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Objective: This study investigates associations between hospital and surgeon volume, and racial differences in recurrence following surgery for prostate cancer.

Methods: Data from the 1991-2002 Surveillance, Epidemiology, and End-Results-Medicare database were examined for 962 Black and 7,387 White men who received surgery for prostate cancer within 6 months of diagnosis during 1993-1999. Cox regression models were employed to estimate the relationships between volume (grouped in tertiles), recurrence or death, and race, controlling for age, Gleason grade and comorbidity score.

Results: Prostate cancer recurrence-free survival rates improved with hospital and surgical volume. Black men were more likely to experience recurrence than White men (Hazard Ratio (HR)=1.34; 95%CI: 1.20, 1.50). Stratification by hospital volume revealed that racial differences persisted for medium and high volume hospitals, even after covariate adjustments (Medium HR=1.30, 95%CI: 1.04, 1.61; High HR=1.36; 95%CI: 1.07, 1.73). Racial differences persisted within medium and high levels of surgeon volume as well (Medium HR=1.43, 95%CI: 1.10, 1.85; High HR=1.57, 95%CI: 1.14, 2.16).

Conclusion: High hospital and physician volumes were not associated with reduced racial differences in recurrence-free survival following prostate cancer surgery, contrary to expectation. This study suggests that social and behavioral characteristics, and some aspects of access, may play a larger role than organizational or systemic characteristics with regard to recurrence-free survival for this population.