

Prostate-specific antigen screening and mortality from prostate cancer

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BACKGROUND: There is no available evidence from randomized trials that early detection of prostate cancer improves health outcomes, but the prostate-specific antigen (PSA) test is commonly used to screen men for prostate cancer.

OBJECTIVE: The objective of the study is to see if screening with PSA decreases mortality from prostate cancer.

DESIGN, SETTING, AND PARTICIPANTS: This is a case-control study using one-to-one matching on race, age, and time of availability of exposure to PSA screening. Decedents, 380, from New Jersey Vital Statistics 1997 to 2000 inclusive, 55-79 years of age at diagnosis were matched to living controls without metastatic prostate cancer. Medical records were obtained from all providers, and we abstracted information about PSA tests from 1989 to the time of diagnosis in each index case.

MEASUREMENTS: Measurements consist of a comparison of screening (yes, no) between cases and controls. Measure of association was the odds ratio.

RESULTS: Eligible cases were diagnosed each year from 1989 to 1999 with the median year being 1993. PSA screening was evident in 23.2-29.2% of cases and 21.8-26.1% of controls depending on the screening criteria. The unadjusted, matched odds ratio for dying of prostate cancer if ever screened was 1.09 (95% CI 0.76 to 1.60) for the most restrictive criteria and 1.19 (95% CI, 0.85 to 1.66) for the least restrictive. Adjustment for comorbidity and education level made no significant differences in these values. There were no significant interactions by age or race.

CONCLUSIONS: PSA screening using an ever/never tabulation for tests from 1989 until 2000 did not protect New Jersey men from prostate cancer mortality.

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