Prostate-specific antigen and prostate cancer mortality: a systematic review.

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Abstract

CONTEXT: Although findings from recently published clinical trials and a review from the U.S. Preventive Services Task Force suggest that there is limited to no prostate cancer mortality benefit associated with prostate-specific antigen (PSA) screening, confusion remains as to whether the use of PSA as a screening tool for prostate cancer is warranted.

EVIDENCE ACQUISITION: A systematic literature review was done in 2012 to identify case-control studies from the past 20 years that focused on evaluating the association between screening for prostate cancer and prostate cancer mortality. Emphasis was put on synthesizing the results of these studies, evaluating their limitations, and identifying remaining questions and issues that should be addressed in future studies.

EVIDENCE SYNTHESIS: A total of seven studies were identified in this time period, with the majority suggesting that a reduction in prostate cancer mortality is associated with PSA screening. However, the findings may be limited by various biases inherent to case-control studies of screening tests, such as selection biases resulting from both case and control subject selection, exposure measurement issues, lead and length biases, and issues specific to prostate cancer screening such as the influence of digital rectal examinations.

CONCLUSIONS: Findings from existing case-control studies of PSA and prostate cancer mortality suggest that there is a mortality benefit from PSA screening. However, these studies may be limited by bias and must therefore be interpreted with caution. As uncertainty regarding PSA screening remains, future studies to evaluate the association between PSA and prostate cancer mortality should address these potential biases directly.

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