

Early prostate cancer detection, screening: No benefit for men with low baseline PSA value

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Men aged 55 to 74 years who have low baseline blood levels of prostate specific antigen (PSA) are not likely to benefit from further screening and treatment. That is the conclusion of a new study published early online in *Cancer*, a peer-reviewed journal of the American Cancer Society. The aim of the study is to help physicians and patients weigh the pros and cons of prostate cancer screening and early detection.

Prostate cancer is the most commonly diagnosed [malignancy](#) and the third leading cause of death from cancer in [men](#) in Western countries. While a man in the United State has about a one in six chance of being diagnosed with prostate cancer during his lifetime, his risk of dying from the disease is relatively low (about one in 36).

Pim van Leeuwen, MD, of the Erasmus University Medical Centre in Rotterdam, the Netherlands, led a team that tried to identify if the baseline PSA can predict which men have most benefit from additional screening. The investigators compared the incidence of prostate cancer with deaths from prostate cancer as related to PSA levels in 43,987 men aged 55 to 74 years who were enrolled between 1993 and 1999 in the European Randomized Study of Screening for Prostate Cancer (ERSPC) study in the Netherlands, Sweden, and Finland. An additional 42,503 men in the same age range from Northern Ireland who had their PSA levels measured between 1994 and 1999 were also included. All men had PSA levels that were under 20 ng/ml at the start of the study, and were

followed for prostate cancer incidence and causes of death through 2006.

A total of 5,861 prostate cancer cases arose during the study period, and prostate cancer death rates were highest in men with high PSA levels at the start of the study. The researchers found that for men with PSA levels between zero and 1.9 ng/ml, a total of 24,642 men would need to be screened and 724 cases of prostate cancer would need to be treated to prevent just one death from prostate cancer. For men with PSA levels between 10 and 19.9 ng/ml, the benefits of screening and treatment were more favorable: a total of 133 men would need to be screened to prevent one death from prostate cancer.

This study indicates that a man's PSA level before diagnosis is a strong predictor for his risk of dying from prostate cancer. For men aged 55 to 74 years who have low PSA levels, the benefits of aggressive follow-up testing and treatment seem limited. Without providing benefits, they may increase prostate cancer diagnoses and lead to overtreatment and increased costs.

"The greatest benefits of [early detection](#) programs may be when men, aged 55-74 years, are diagnosed and treated when their serum PSA is in the range 4.0-9.9 ng/ml or 10.0-19.9 ng/ml. Furthermore, following research efforts that recommend more intensive PSA based screening by lowering the PSA cut-off may greatly increase the number of men that need additional investigations and treatment, whilst having little effect on the reduction of [prostate cancer](#) mortality," the authors wrote.

Dr. van Leeuwen cautioned that, "the results presented in the current study are limited due to the relatively short follow-up. Consequently the pros of early detection and screening may increase with longer the follow-up while the cons may relatively decrease."

Provided by Wiley

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