

PSA for prostate screening unaffected by changes in screening guidelines

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Micrograph showing prostatic acinar adenocarcinoma (the most common form of prostate cancer) Credit: Wikipedia, [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/)

Controversy over prostate cancer screening guidelines that discourage use of PSA tests did not significantly reduce use of the test, a five-year review of more than 275,000 visits at UT Southwestern Medical Center showed.

Revised guidelines from the United States Preventive Services Task

Force in 2012 advised against PSA-based screening for [prostate cancer](#), concluding that the potential harms of overtreatment outweighed the possible benefits of early detection. UT Southwestern cancer researchers' review of electronic medical records showed that this conclusion did not discourage the number of tests ordered, contrary to some other findings.

"We used actual, real-world data and found that changes in PSA use, if any, are likely small," said [Dr. Yair Lotan](#), Professor of Urology, Chief of Urologic Oncology, and a member of UT Southwestern's [Harold C. Simmons Comprehensive Cancer Center](#). "Many recent studies have claimed that the task force recommendations against PSA screening have caused a major change in [prostate cancer screening](#). These studies were based on data sources including surveys, which could be subject to significant bias."

Prostate cancer is the second leading cause of cancer death in U.S. men. PSA screening uses a blood test to check for the level of prostate-specific antigen, or PSA, a protein produced by cells of the prostate gland, according to the National Cancer Institute. Higher levels can be associated with prostate cancer; however, recent studies have shown prostate cancer can occur when PSA levels are low and be absent when PSA levels are high, leading to conflicting recommendations on use of the test, which has been approved by the Food and Drug Administration (FDA).

The U.S. Preventive Services Task Force that discourages PSA testing as a screening tool is an independent, volunteer panel of national experts appointed by the Agency for Healthcare Research and Quality to make recommendations on preventive services such as screenings, counseling services, and preventive medications. Their guidelines are voluntary.

"Despite a 39 percent decrease in [prostate cancer mortality](#) since 1991,

when PSA screening became widespread, controversy about the benefits and harms of PSA-based screening remains," said Dr. Lotan, who holds the Helen J. and Robert S. Strauss Professorship in Urology. "Potential harms of PSA testing include false positives, which create anxiety, and overdiagnosis, which can potentially impact the patient's quality of life."

Overtreatment can result in side effects such as erectile dysfunction and urinary incontinence.

For this study, published in the journal [Cancer](#), researchers looked at 275,000 patient visits involving more than 63,000 PSA tests ordered for both inpatient and outpatient services from 2010-2015. The number of tests ordered was similar before and after the revised guidelines, although the PSA levels in patients were slightly higher by the time doctors ordered the tests after the guidelines were revised, the study found. Researchers concluded the slightly higher PSA levels probably had little clinical impact on treatment or results.

According to the National Cancer Institute (NCI), about 180,890 men will be diagnosed with prostate cancer this year, and about 14 percent of men will be diagnosed sometime during their lifetime. Prostate cancer risk increases with age, and most cases occur after age 60.

In 2008, the U.S. Preventive Services Task Force (USPSTF) recommended against PSA-based screening for prostate cancer in men age 75 years and older and concluded that the evidence was insufficient to make a recommendation in younger men. Four years later, in 2012, the task force advised against PSA-based screening for prostate cancer in all age groups.

Their recommendations differ from the American Cancer Society and the American Urological Association, both of which recommend shared decision making between a patient and their physician to discuss the

risks and benefits of PSA testing.

Additional UT Southwestern researchers involved in the studies of PSA screenings are: [Dr. Claus G. Roehrborn](#), Chair and Professor of Urology, holder of the E. E. Fogelson and Greer Garson Fogelson Distinguished Chair in Urology and the S.T. Harris Family Chair in Medical Science, in Honor of John D. McConnell, M.D.; Dr. Ryan Hutchinson, Assistant Instructor of Urology; Dr. Abdulhadi Akhtar, resident in Urology; and Justin Haridas and Deepa Bhat in the Quality Control area of UT Southwestern.

UT Southwestern's [Harold C. Simmons Comprehensive Cancer Center](#) is the only NCI-designated Comprehensive Cancer Center in North Texas and one of just 47 NCI-designated Comprehensive Cancer Centers in the nation. Simmons Cancer Center includes 13 major cancer care programs and its education and training programs support and develop the next generation of cancer researchers and clinicians. Simmons Cancer Center is among only 30 U.S. cancer research centers to be designated by the National Cancer Institute as a National Clinical Trials Network Lead Academic Participating Site.

Risk Factors

Risk factors for prostate cancer include:

- Age - The risk of developing prostate cancer increases steadily after men reach age 50; about 60 percent of cases arise in men older than 65
- Ethnicity - African-American men and Caribbean men of African ancestry have a significantly higher risk of developing prostate cancer than do men of other races
- Family history of prostate cancer
- Genetic variations

- Other factors such as smoking, diet, obesity, and vasectomy have been linked to slight increases in risk for developing prostate cancer, but definitive cause-and-effect relationships have not been proven with research.

Symptoms

Most often there are no specific signs or symptoms of early prostate cancer, which is why it is important for men to discuss [prostate-specific antigen \(PSA\) screenings and rectal exams](#) with their physician. The best time to be screened for prostate cancer is before men develop symptoms as prostate cancers that present with blood in the urine or inability to urinate are often late stage.

Provided by UT Southwestern Medical Center

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