

Prostate cancer surveillance criteria may not be accurate for African American men

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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/)

A new study published in *The Journal of Urology* revealed that African American men with Gleason score 3+3=6 prostate cancer (PCa) produce less prostate specific antigen (PSA) and have significantly lower PSA density (PSAD) than Caucasian men. These findings could have important implications when selecting patients for inclusion in active PCa surveillance programs.

Prostate cancer remains the second leading cause of [cancer death](#) among [men](#) in the U.S., with nearly 30,000 deaths annually. According to the latest recommendations by the American Urological Association, PSA remains the only screening test to select men with unremarkable digital rectal examination in whom prostate biopsy should be considered. Deaths from [prostate cancer](#) have declined by about 40% since the advent of PSA screening in the late 1980s, and 40-70% of that decline may be attributable to screening. For early stage low grade disease, active surveillance, commonly called watchful waiting, is considered appropriate.

Although prior studies have identified race as a contributing risk factor for PCa, lead investigator Oleksandr N. Kryvenko, MD, Assistant Professor of Pathology and Urology at Sylvester Comprehensive Cancer Center at the University of Miami Miller School of Medicine, explained that "active surveillance criteria that were predictive in Caucasian men were not accurate in African American men. Despite this finding, active surveillance criteria do not include race as a variable."

In this study the investigators measured tumor volume from consecutive radical prostatectomies in 414 men with National Comprehensive Cancer Network low risk prostate cancer (348 Caucasians, 66 African Americans). They compared clinical presentation, pathological findings, PSA, PSAD, and PSA mass (PSAM), which is an absolute amount of PSA in a patient's circulation, between African American and Caucasian men.

This study revealed that African American men with Gleason score 3+3=6 PCa produce less PSA than Caucasian men. African American and Caucasian men had equal serum PSA and PSAM despite significantly larger prostates in African American men (approximately 10 gm larger) with all other parameters, particularly total tumor volume, being the same. PSAD was approximately 20% lower in African

American men compared to Caucasian men, even when tumor volume was the same.

"When low volume and low grade cancer is detected, especially in older individuals, the decision between active surveillance and definitive therapy must be made. Because PSAD was about 20% lower in African American men even with the same tumor volume as in Caucasians, this finding could be one of the factors why current active surveillance criteria in African Americans are not as accurate as those for Caucasians. A lower PSAD threshold for active surveillance inclusion criteria in African American men may account for these differences," commented Dr. Kryvenko.

Dr. Kryvenko added that this new discovery complements his prior observations published in *The Journal of Urology* (J Urol. 2014 Jan;191(1):60-7.). "African Americans overall not only have a higher grade cancer at radical prostatectomy, but also their spatial distribution of cancer in prostate is such that standard prostate biopsy may undersample more aggressive tumor nodules. Thus, there could be a constellation of factors explaining why contemporary surveillance criteria do not work well in African American men."

More information: "African American Men with Gleason Score 3+3=6 Prostate Cancer Produce Less PSA Than Caucasian Men: A Potential Impact on Active Surveillance," by Oleksandr N. Kryvenko, Raymond Balise, Nachiketh Soodana Prakash, and Jonathan I. Epstein. Published online in advance of *The Journal of Urology*, Volume 195, Issue 2 (February 2016)

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