

Prostate cancer blood test equally effective across ethnic groups

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Credit: Karolina Grabowska from Pexels

The Stockholm3 blood test, developed by researchers at Karolinska Institutet, is equally effective at detecting prostate cancer in different ethnic groups, a new paper [published](#) in the *Journal of Clinical Oncology*

reports. The test produces significantly better results than the current PSA standard.

Stockholm3, a prostate cancer test developed in Sweden, runs a combination of protein and [genetic markers](#) from a blood sample through an algorithm to find the probability of a patient having clinically significant cancer.

Studies in more than 90,000 men have shown that Stockholm3 produces significantly better results than the current PSA standard. The test improves prostate cancer diagnosis by reducing unnecessary MRI and biopsies and by identifying significant cancers in men with low or normal PSA values.

Ethnically diverse group

However, previous studies have been conducted primarily in Scandinavia on a mainly white population with uncertain generalizability to the rest of the world. A Swedish–American research group has now examined how well it works in an ethnically mixed group of men in the U.S. and Canada.

The study included more than 2,000 men at 17 different clinics, 16% of whom were Asian, 24% were African-American, 14% were Latin American and 46% were white American. All participants had a referral for a [prostate biopsy](#) on the basis of an elevated PSA score, abnormal rectal examination, MRI scan or other suspicious clinical finding.

Before the biopsy was performed, a [blood test](#) was taken along with [clinical data](#) pertinent to the Stockholm3 test, which was conducted blinded to the biopsy results.

Halving the number of unnecessary biopsies

The analysis shows that clinically relevant [prostate cancer](#) cases were found in a total of 29% of the men, somewhat more in African Americans and slightly fewer in Asians. It also shows that the Stockholm3 test could almost halve the number of unnecessary biopsies (45% fewer: 673 as opposed to 1,226) while being no less effective at detecting all clinically relevant cases. The results were similar across the different ethnic groups.

"The study demonstrates that the Stockholm3 test is just as effective on an ethnically mixed group as it is on a white, Swedish population," says the study's lead author Hari T. Vigneswaran, doctor and Ph.D. student at the Department of Medical Epidemiology and Biostatistics, Karolinska Institutet.

According to him, the research answers several important questions and will lead to a more widespread use of the method. "Colleagues in other countries are very interested in these data, which show that Stockholm3 works for a non-Swedish population and among minorities."

More information: Hari Thambiah Vigneswaran et al, Stockholm3 validation in a multi-ethnic cohort for prostate cancer (SEPTA) detection: A multicentered, prospective trial., *Journal of Clinical Oncology* (2024). [DOI: 10.1200/JCO.2024.42.4_suppl.262](https://doi.org/10.1200/JCO.2024.42.4_suppl.262)

Provided by Karolinska Institutet

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