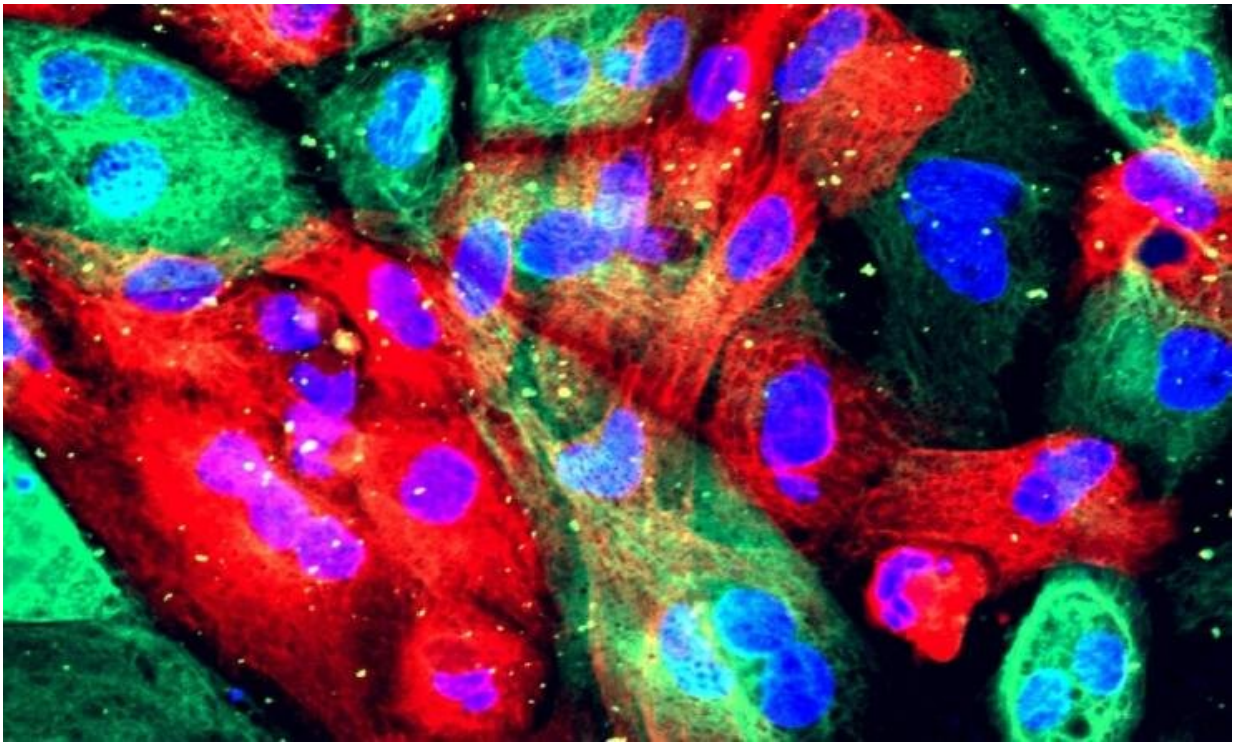
The new prostate cancer blood test with 94 per cent accuracy

February 8 2023



Prostate cancer cells. Credit: NIH Image Gallery

Researchers at the University of East Anglia have helped develop a new blood test to detect prostate cancer with greater accuracy than current methods.

New research shows that the Prostate Screening *EpiSwitch* (PSE) blood

test is 94 percent accurate—beating the currently used prostate-specific antigen (PSA) blood test.

The research team say that the new test shows significant potential as an accurate and rapid cancer screening diagnostic.

The test was developed by Oxford Biodynamics in collaboration with UEA, Imperial College London and Imperial College NHS Trust.

Prof Dmitry Pshezhetskiy, from UEA's Norwich Medical School, said, "Prostate cancer is the most common cancer in men and kills one man every 45 minutes in the UK.

"There is currently no single test for prostate cancer, but PSA blood tests are among the most used, alongside physical examinations, MRI scans and biopsies.

"However, PSA blood tests are not routinely used to screen for prostate cancer, as results can be unreliable.

"Only about a quarter of people who have a prostate biopsy due to an elevated PSA level are found to have prostate cancer.

"There has therefore been a drive to create a new blood test with greater accuracy."

The UEA team evaluated the new PSE test, which combines the traditional PSA test with an epigenetic EpiSwitch test, in a pilot study involving 147 patients.

They compared its results with those of the standard PSA test—and found that PSE significantly enhances overall detection accuracy for at-risk men.

Prof Pshezhetskiy said, "When tested in the context of screening a population at risk, the PSE test yields a rapid and minimally invasive prostate cancer diagnosis with impressive performance. This suggests a real benefit for both diagnostic and screening purposes."

Dr. Jon Burrows, Chief Executive Officer at Oxford Biodynamics said, "There is a clear need in everyday clinical practice for a highly accurate blood test that can screen men for prostate cancer and accurately identify those at risk, while sparing those who up to now would be subject to unnecessary, expensive and invasive procedures.

"This is another example of how our product portfolio can contribute to reducing the total cost of care for global health."

"Circulating chromosome conformation signatures significantly enhance PSA positive predicting value and overall accuracy for prostate cancer detection" is published in the journal *Cancers*.

More information: Dmitri Pchejetski et al, Circulating Chromosome Conformation Signatures Significantly Enhance PSA Positive Predicting Value and Overall Accuracy for Prostate Cancer Detection, *Cancers* (2023). DOI: 10.3390/cancers15030821

Provided by University of East Anglia