Urine Test Could Show Whether Prostate Cancer Is Aggressive

The ExoGrail test could help reduce the need for invasive biopsies.

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A new urine test could help diagnose prostate cancer and indicate how aggressive it is. The test, called ExoGrail, could lower the need for more invasive diagnostic tests, potentially reducing the number of unnecessary biopsies by 35%. These findings were published in the journal Cancers.

Among American men, prostate cancer is the most common type of cancer besides skin cancer. According to the American Cancer Society, there will be an estimated 248,530 new cases and 34,130 deaths from prostate cancer in the United States this year. Prostate cancer is the second most common cause of cancer-related death among men in the United States, after lung cancer.

One in eight men will be diagnosed with prostate cancer in their lifetime, with an average age at diagnosis of 66 years. However, in many cases, prostate cancer progresses slowly, and most of these men will not die from the disease.

“While prostate cancer is responsible for a large proportion of all male cancer deaths, it is more commonly a disease men die with rather than from,” Daniel Brewer, PhD, of the University of East Anglia in the United Kingdom, said in a press release. “Therefore, there is a desperate need for improvements in diagnosing and predicting outcomes for prostate cancer patients to minimize overdiagnosis and overtreatment whilst appropriately treating men with aggressive disease, especially if this can be done without taking an invasive biopsy.”

In order to detect and stage prostate cancer, blood tests, physical examinations, MRI scans or invasive biopsies are usually recommended. However, according to Brewer, “Invasive biopsies come at considerable economic, psychological and societal cost to patients and health care systems alike."

To create the ExoGrail test, Brewer and colleagues used urine samples from 207 individuals who had received a biopsy to detect prostate cancer at Norfolk and Norwich University Hospital. Based on earlier tests called PUR and ExoMeth developed by the same team, ExoGrail uses two different types of biomarkers to diagnose prostate cancer. The first is a protein marker called EN2, and the second assesses expression of 10 genes known to reflect prostate cancer risk.

Comparing results from the ExoGrail test to those from biopsies, the researchers found that the test had correctly identified which individuals had prostate cancer and which did not. Further, the test provides a risk score that can indicate which individuals would benefit from an invasive biopsy.

“Our new urine test not only shows whether a patient has prostate cancer, but it importantly shows how aggressive the disease is,“ said Brewer. ”This allows patients and doctors to select the correct treatment. And it has the potential to reduce the number of unnecessary biopsies by 35%."

Click here to read the study in Cancers.

Click here to learn more about prostate cancer.

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