

Novel urine-based test for non-invasive detection of bladder cancer

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Credit: designer 491

A collaboration between University of Birmingham researchers and liquid biopsy cancer detection and screening company Nonacus, has resulted in a novel test for the non-invasive detection of bladder cancer,

which was launched March 10 at the [Annual Meeting of the European Association of Urology](#).

Called GALEAS Bladder, the urine-based molecular test can quickly and accurately detect [bladder cancer](#) and streamline diagnosis, reducing the need for invasive cystoscopies.

It uses highly sensitive [liquid biopsy technology](#) developed by Nonacus in conjunction with a panel of biomarkers developed by Professor Rik Bryan and Dr. Douglas Ward from the University's Bladder Cancer Research Center, to detect the presence of bladder cancer by finding DNA from tumor cells present in the urine.

The researchers validated the biomarker panel was in over 600 patient samples from 3 UK clinical cohorts, and analyses have confirmed the performance of the test, showing high diagnostic accuracy (sensitivity >90%, specificity >85%) across all grades and stages of bladder cancer.

Professor Rik Bryan said of the launch: "Since 2009, Doug Ward and I have been working on various strategies to accurately and reliably detect bladder cancer from a [urine sample](#). The DNA-based genomic approaches that we have been developing over the last eight years, with funding from Cancer Research UK and support and expertise from Nonacus, have allowed us to do just that with a test that appears to rival cystoscopy with regard to sensitivity and specificity for the diagnosis of bladder cancer in patients being investigated for hematuria.

Our unpublished data also demonstrates that it is possible to use the same mutation panel and Nonacus platform to identify circulating tumor DNA, thus raising the exciting possibility that a single approach can be used throughout the patient pathway."

The test has the potential to work across the entire bladder cancer patient

pathway, reducing the reliance on invasive cystoscopy and expensive imaging for non-muscle-invasive [bladder](#) cancer surveillance and minimal residual disease monitoring, as well as triage for hematuria (blood in urine).

Chris Sale, CEO of Nonacus, said, "We are very excited to launch GALEAS Bladder. We are striving to develop a suite of meaningful non-invasive tools that can have real impact on the diagnosis and treatment of patients with suspected [cancer](#). GALEAS Bladder represents the first in this pipeline, helping to improve patients' lives and reducing the burden of cystoscopy on over stretched clinics. "

Provided by University of Birmingham

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