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Singapore researchers embarks into a study validatingÃ?Â Urine-Based Multi-Cancer Test

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Diagnostics Development Hub (DxD Hub) collaborate with SGH in a one year research study to validate Lucence's proprietary technology that identifies multiple cancer types from a single test, previously developed for blood samples



Singapore General Hospital (SGH), Lucence, and the Diagnostics Development Hub (DxD Hub), a national platform hosted by the Agency for Science, Technology and Research (A*STAR), have jointly launched a study to validate the accuracy and reliability of this urine-based test for early detection of these cancers.

Principal Investigator of the study, Associate Professor Kenneth Chen, Senior Consultant, Department of Urology, SGH, said, “Bladder, kidney, and prostate cancers are often asymptomatic in the early stages. That’s why most patients only seek medical attention when symptoms show up, often when the tumour is larger, and the cancer is more advanced. Cancers detected early generally have better outcomes. That is why we hope a single, simple, non-invasive screening method like a urine test that many are familiar with, could lead to more proactive screening, especially those at higher risk of developing these cancers.

The one-year validation study leverages Lucence’s proprietary technology that identifies multiple cancer types from a single test, previously developed for blood samples. Early research, however, has shown that urological cancers tend to be harder to detect in blood tests. As urological cancers are connected to the urinary system, the team hopes that the cancer signals would show up more prominently, or even earlier, in urine samples.

When patients present with symptoms like haematuria (blood in urine), determining the underlying cause can be complex, as it could indicate various conditions ranging from benign ones such as urinary tract infections and kidney stones, to potentially cancer. A single urine test screening for all three urological cancers could help clinicians better direct specific diagnostic investigations, reducing the need for multiple separate tests including imaging scans and invasive scope procedures.

DxD Hub will lead the development of the urine extraction workflow to complement Lucence’s proprietary technology for multi-cancer early detection. The workflow will help ensure stability and robust processing of urine samples to improve the test’s

effectiveness.

Dr Weng Ruifen, Chief Executive Officer of DxD Hub said, “Current diagnostic approaches for urological cancers often involve multiple invasive procedures that create discomfort for patients and strain healthcare resources. Through our development of the urine extraction workflow, DxD Hub aims to provide clinicians with a reliable, non-invasive screening tool that enables more efficient patient triage and better-informed clinical decisions. This innovation could streamline diagnostic pathways, reduce unnecessary procedures, and facilitate earlier interventions— ultimately leading to improved patient outcomes. The kit could also complement broader efforts in preventive healthcare.”