

# Republic to trial multi-cancer early detection tests, targeted screening

Such tests are currently not part of the national cancer screening programme

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A clinical study involving 1,000 people at higher risk of cancer due to genetic factors or pre-cancerous conditions will be carried out in the second half of 2026 to evaluate the use of popular multi-cancer early detection (MCED) tests.

Led by a team from the National Cancer Centre Singapore (NCCS), the study will determine if MCED tests successfully identify early-stage cancers in participants.

The 1,000 participants recruited will be linked to Singapore's national health database and tracked over time to see if they are diagnosed with cancer and what their long-term survival outcomes are.

While this emerging cancer screening technology is currently used worldwide, there is limited evidence that the tests actually improve population health outcomes.

MCED tests are "liquid biopsies", in that tumour DNA and other cancer markers are detected from the bloodstream instead of taking a tis-

sue sample directly from a suspected tumour.

They also screen for signs of many different cancers in a single blood test.

MCED tests rarely give false alarms, said Professor Ravindran Kanesvaran, chairman of the medical oncology division at NCCS, and can also predict where the cancer started from. There are, however, important limitations "because with early tumours, you are not going to get a lot of circulating tumour DNA", he said.

Prof Ravindran said most existing clinical trials on MCED tests were done in the West and involved predominantly Caucasian populations. "The performance characteristics of these tests in Asian populations with their distinct cancer epidemiology and genetic architecture cannot simply be assumed to be the same."

He also noted that the tests are very expensive, at about \$1,000 to \$5,000 each. If introduced without thinking about access and cost, they could end up exacerbating healthcare inequality.



Ms Lim Shi-Min had a mammogram done when she turned 50, which revealed a mass that was classified as Stage 0 breast cancer. ST PHOTO: KEVIN LIM

MCED tests are currently not part of Singapore's national cancer screening programme owing to limited evidence demonstrating their cost-effectiveness and benefit at a national level.

And while they hold potential, they are not a replacement for recommended screening tests, including mammograms for breast

cancer, Pap smears for cervical cancer and colonoscopies for colorectal cancer.

This study was one of two launched by the Research Institute for Cancer Prevention, Screening and Early Detection (RISE) on May 13. RISE is jointly led by NCCS and Nanyang Technological University's Lee Kong Chian School of

Medicine (LKC Medicine).

Prof Ravindran and Professor Jon Emery, a professor of family medicine at LKC Medicine, are co-directors of RISE.

The other study, called the Cancer Risk Assessments and Early detection or CRAnE, will focus on targeted screening and prevention of cancers linked to metabolic dysfunctions such as diabetes, high blood pressure, high cholesterol and obesity. These conditions increase the risk of developing several cancers, such as colorectal, lung and breast cancers.

Led by LKC Medicine, the study will test multi-cancer risk assessment methods in primary care so that people will be matched to screening tests and prevention advice based on their individual risk.

Prof Emery said there is currently no centre in Asia that conducts translational research, shapes policies and delivers education focused on cancer prevention and early detection.

"RISE fills this critical gap in the region. It also recognises the important role of primary care across the cancer continuum, from prevention to screening, to early diagnosis and surviving the cancer," he said.

"Through RISE, both LKC Medi-

cine and NCCS have the opportunity to build on Singapore's healthcare policies and improve the delivery of cancer screening services in primary care and hospitals."

One cancer survivor who supports early screening is Ms Lim Shi-Min, 51, a church administrative manager.

Her mother's breast cancer drove her to screen herself at the age of 43. "There is a saying in Chinese that when your mother has cancer at 50, you should test yourself at age 40. They found a lump in my left breast but it was not growing and had not been since 2018," she told reporters.

When she turned 50 in 2025, she had a mammogram done at Eunos Polyclinic under Healthier SG, and it revealed "a cluster of calcification". "I was referred to NCCS and the mass was classified as Stage 0 by the doctor," she said.

Stage 0 breast cancer is the earliest, non-invasive form of breast cancer, where abnormal cells are found only in the lining of the milk ducts and have not spread into surrounding breast tissues.

Between August and October 2025, she underwent three operations and started eight sessions of radiation.

"I am grateful that the cancer was detected early, allowing me to get treated early. I am able to return to work, spending time with family and friends," she said.

"I hope my story will encourage people who are at high risk to keep up with their regular screening."

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