

New test to indicate likely spread or recurrence of breast cancer

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Helen McCosker's research found that a breast cancer's interaction with its surrounding environment held the key to predicting whether it would grow, become dormant or spread to other organs.

(Medical Xpress) -- A Queensland University of Technology (QUT) PhD student has developed a potential breakthrough test for predicting the likelihood of the spread or return of breast cancer.

"While in recent years there have been fantastic advances in the treatment of [breast cancer](#) there has been no way of predicting its progress," said Helen McCosker, a PhD student at the Institute of Health and Biomedical Innovation (IHBI).

Ms McCosker's research found that a breast cancer's interaction with its

surrounding environment held the key to predicting whether it would grow, become dormant or spread to other organs.

"The ability to predict its progress is a huge step forward as it will ultimately enable doctors to select the most appropriate treatments for individual patients," she said.

"This test should identify those patients who need their cancer removed but require no further treatment, those who need the [tumour](#) removed but also require additional treatment, for example, chemotherapy, and those who need more vigorous treatments.

"That will mean that patients should neither receive unnecessary treatments nor be undertreated when a more aggressive medical response is required."

Ms McCosker said the [new test](#) would use the tissue surrounding the [cancer cells](#), which were collected for [biopsy](#) purposes, but were currently not examined.

"The test makes better use of tissue that's already being collected anyway, so from the patient's point of view there would be no change; no new test," she said.

She said the next step was to develop an easy-to-use, accurate online program that doctors would use to diagnose [cancer progression](#).

"Ultimately, doctors should be able to key the results of the examination of [tissue samples](#) into an online program with built-in mathematical models and be presented with a clear answer as to the likelihood of cancer progression."

She said the test would offer solutions for a wide range of patients,

particularly those with more advanced, aggressive, disease that could spread to other organs as well as those in rural and remote areas with limited access to advanced medical services.

"The next step is to seek financial backing to fine-tune and commercialise the current prototype. It's expected our models will be trialled in pathology laboratories over the coming years and if successful rolled out over the next five to 10 years," Ms McCosker said.

Ms McCosker said the test, which is being funded by the Wesley Research Institute, should ultimately be applicable to other forms of cancer.

She said breast cancer accounted for 28 per cent of diagnosed cancers in Australian women and 16 per cent of cancer associated deaths.

Provided by Queensland University of Technology

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