WA-made device to improve outcomes for women with breast cancer

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Hoping to improve outcomes for patients with early-stage breast cancer, a new innovative, WA-made surgical device that can detect residual cancer tissue during breast conserving surgery is being trialled at Fiona Stanley Hospital (FSH).

The ‘MARGIN’ trial's Coordinating Principal Investigator A/Prof Saud Hamza said the device uses real-time imaging and artificial intelligence to detect areas of tissue stiffness typical of cancer tissue, helping surgeons detect and capture all cancer precisely.

Diagnosed with breast cancer in 2025 from a routine mammogram, 73-year-old Keryl participated in the trial hoping that the device would help surgeons detect all cancerous tissue in her surgery and improve her outcomes.

“The surgical device detected abnormal cells during my operation, which were beyond the initial sites detected with ultrasound,” Keryl said.

“The specimens were sent to pathology, and I was able to subsequently have them removed to improve my outcomes.”

Dr Hamza said that combined with breast specimen radiology testing of the removed tissue for a clear margin of healthy cells, surgeons usually rely on touch to identify if stiffer cancerous tissue remains after the tumour has been removed.

“This device provides the surgeon with real-time data on the tissue with more than 97 percent accuracy, aiding them to detect all cancer during the first surgery and enabling patients to proceed with subsequent treatments without delay,” Dr Hamza said.

Keryl, who starts radiation treatment this week, said while a breast cancer diagnosis was a shock, participating in the trial for more accurate detection of the cancer, gave her hope.

“I’m so grateful for FSH breast cancer services and their support to progress this research and technology for the benefit of patients like me,” Keryl said.

Dr Hamza said it is hoped the device will eventually enable detection and removal of otherwise undetected cancerous cells within the first operation, for the one in five women like Keryl who may require a second surgery for a re-excision of margins.

The ‘MARGIN’ trial has been recruiting patients since February this year at FSH and other hospitals across Western Australia and Victoria and is expecting completion early to mid 2027. Following the completion of the trial and regulatory assessment, it is hoped the device will become available for use in Australia and internationally.

This research trial has been funded by OncoRes Medical, under the governance of its Chief Principle Investigator, Breast Surgeon, Professor Christobel Saunders.

For further information or interest in the trial, please contact trial research Clinical Nurse Consultant Tamara Casey.