

Breakthrough breast cancer technology coming; Fundraiser nets state-of-the-art detection device for Mount Saint Joseph

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VANCOUVER - Breakthrough technology in breast cancer detection will soon be available at Vancouver's Mount Saint Joseph Hospital.

Digital tomosynthesis mammography will be especially beneficial to the Asian population, many of whom have high-density breast tissue.

"Digital tomosynthesis mammography is more than an evolution. It's a revolution." said Dr. Richard Lee, staff radiologist at Mount Saint Joseph.

This will be the first time the technology is available in Canada, said Lee, who hopes to have the digital machinery with the tomosynthesis software in place and serving patients by early next year.

At Mount Saint Joseph, about 70 per cent of Dr. Lee's patients are of Asian origin. "Because of the higher density breast tissue, it's much harder to detect."

Women with dense breast tissue have a 400-to-600-per-cent greater risk of developing breast cancer, said Ann Corrigan, CEO of Tapestry Foundation.

The foundation successfully fundraised to purchase the technology for the hospital after Mount Saint Joseph identified the machine as one that would "best serve the Asian community."

The advantage of the technology is that it allows three-dimensional or "slice imaging" of the breast tissue and takes multiple images of the breast tissue from many angles.

Traditional mammography provides two X-ray views, Lee said, top to bottom and side to side. The resulting images are processed on film, and typically lose some quality through the processing.

Digital mammography is a diagnostic improvement, because the film processing step is eliminated. Tomosynthesis takes the digital process a giant leap forward. It works with digital mammography machinery and provides 15 to 20 images using a moving X-ray beam that creates three-dimensional views.

"Imagine a loaf of bread and inside the loaf is a grain of rice," Lee said. "It could be deep-centre, it could be peripheral, we do not know. You put it in an old analogue machine and it takes a picture from two angles. You may see the rice grain, you may not."

Tomosynthesis imaging will "slice the bread up," he said. "We can piece it away slice by slice until we isolate the slice with the rice grain."

The tomosynthesis software will allow the digital technology to view the breast tissue from many angles, reducing confusion between benign and malignant tissue, Lee said.

There will be a reduction in false positives and a reduction in unnecessary biopsies, reducing anxiety for patients.

In addition, Lee said, less compression of the breast is required, making the procedure more comfortable for patients.

Ouida Lanuza, a breast cancer survivor, was thrilled the new technology will soon be available.

Lanuza is Filipina, and her initial diagnosis was complicated by her dense breast tissue.

"I found the lump through self-examination," said Lanuza. "I was asked to return after the first mammogram because it wasn't showing.

"I had to go back for a total of four mammograms, and an ultrasound, but with the compression they couldn't detect it."

By the time the tumour was discovered and biopsied, eight weeks had passed.

"It was eight weeks of anxiety, and then I was told my diagnosis. Invasive, Grade 3 carcinoma. It was really fast-growing."

Lanuza underwent a mastectomy followed by chemotherapy, and is now cancer-free.

"Had I had this technology available it would have saved me from the gruelling pain, the treatments, the anxiety of waiting for the results," said Lanuza.

Although the technology has not yet been approved by the Food and Drug Administration in the United States, or by Health Canada, Lee said, "Tomosynthesis is poised to dominate breast cancer detection from next year onwards."