

Hamilton robot can detect and treat breast cancer

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A Hamilton robot that could transform the early detection and treatment of breast cancer is within months of being tested on patients.

The image-guided autonomous robot called IGAR is being showcased Monday to some of the world's top surgical innovators by creator Dr. Mehran Anvari at the Innovation Nation Conference in Muskoka.

Anvari expects to start testing the robot that can instantly and precisely biopsy and destroy lumps on up to 120 patients in Hamilton, Toronto, Quebec and the United States by early 2013.

"Women in Hamilton will be one of the first to have access to it," said Anvari. "Its accuracy is extremely high. We hope it will enhance care."

IGAR was developed by the Centre of Surgical Invention and Innovation (CSII), which is housed at McMaster University and St. Joseph's Healthcare.

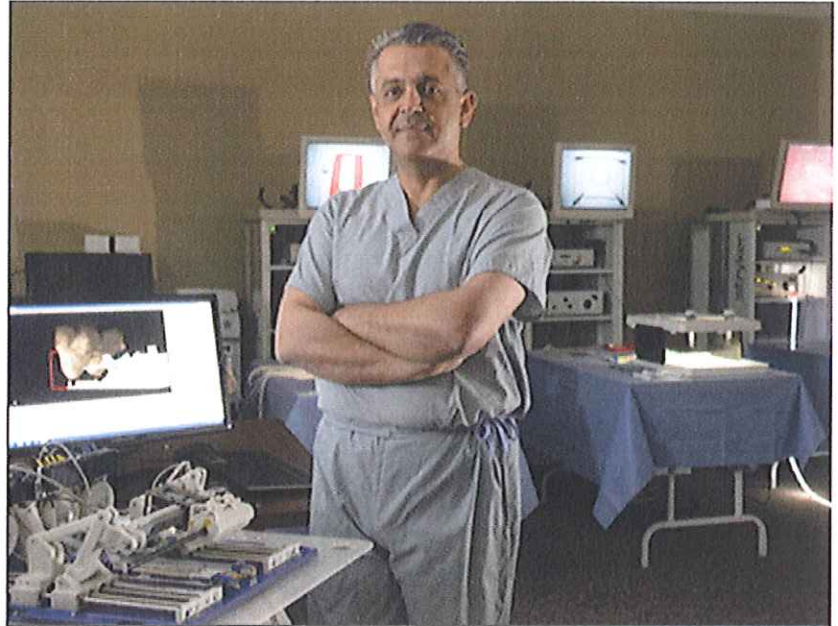
The centre's conference, focusing on Canadian innovation, is being held at JW Marriott The Rosseau Muskoka Resort & Spa in Minett Monday and Tuesday.

"It's a lovely part of Canada," said Anvari, scientific director and CEO of CSII, about why the conference is in Muskoka. "(CSII) is a Canadian-wide resource and we have international guests."

He says Hamilton is being considered for next year's conference.

Originally, Tony Clement, president of the Treasury Board of Canada and minister for FedNor, was a keynote speaker, as the centre gets much of its funding from the federal government and the conference is in his riding. But he dropped out late last week due to scheduling conflicts.

IGAR holds big potential both for patients and the city of Hamilton.



Mehran Anvari. A Hamilton robot designed to detect and treat breast cancer is being showcased Monday by creator Dr. Mehran Anvari at the Innovation Nation Conference in Muskoka. Gary Yokoyama/The Hamilton Spectator Source: The Hamilton Spectator

The spiderlike robot attaches to any magnetic resonance imaging (MRI) machine. If a lump is found, the doctor gives the co-ordinates to IGAR, which instantly performs a precise biopsy to determine if the lump is benign or a cancerous tumour. The robot can also destroy it at the same time.

"I really think it's the way of the future," said Dr. Michael Noseworthy, scientific director of the imaging research centre at St. Joseph's Healthcare. "Something like this is really going to get the eyes of the world."

The main advantages of the robot are its accuracy and the ability to scan, test and remove the lump all at once instead of patients having separate appointments for each step.

"We're going to be able to dramatically minimize the likelihood of missing the key part of the tumour," said Noseworthy. "The standard of care right now has all different steps the person has to go through and more anxiety is built up. Instead of having multiple procedures, it's all done with one visit."

If the clinical trials are successful, Anvari hopes the robot will be built in Hamilton.

"Hamilton has long wanted to be a leader in the bio-tech industry and transition to it," said Anvari.

Turning medical discoveries into profitable businesses is a major push at McMaster.

"It's an exciting opportunity," said Dr. John Kelton, dean and vice-president of McMaster's faculty of health sciences. "The better care is the most exciting but this could have a spinoff effect. That's a very large market."

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