Innovations of the Future

THE WORLD'S FIRST PATIENT-FRIENDLY TEST FOR COLON CANCER COULD SAVE THOUSANDS OF LIVES AND ALLOCATE SCARCE HEALTHCARE RESOURCES EFFICIENTLY ■ REHABILITATION ROBOT MAY EXTEND REACH TO MORE PHYSIOTHERAPY PATIENTS ■ COLLAPSIBLE VALVE OFFERS HOPE TO THOSE TOO WEAK FOR OPEN HEART SURGERY

MEDEC
CANADA'S MEDICAL DEVICE TECHNOLOGY COMPANIES
LES SOCIÉTÉS CANADIENNES DE TECHNOLOGIE DES DISPOSITIFS MÉDICAUX

The world's first patient-friendly test
for colon cancer could save thousands of lives and allocate scarce healthcare resources efficiently.

It's a sad fact that, by the time they are diagnosed with colorectal cancer, most Canadians are already in an advanced stage of the disease, with only a 10 per cent chance of survival.[1] The leading cause of cancer-related deaths in non-smokers,[2] colorectal cancer (CRC) was responsible for 8,700 Canadian deaths in 2007.[3]

technology overview

A blood sample is drawn from a patient and changes in the activity of a specific panel of genes are measured. By quantifying these changes this test is able to assess a patient's current risk of having colorectal cancer.

Even sadder is the knowledge that 90 per cent of CRC patients can be cured if their disease is detected early.[1] In these early stages, however, CRC produces no symptoms. So early detection relies on screening, which less than 20 per cent of patients currently submit to.[4]

With early detection being the key to battling this disease, why don't more people get screened? Despite the gradual awareness of the importance of routine CRC screening, the lack of patient friendly screening options continues to be a barrier to patient compliance with current screening guidelines. Stool tests, while safe, are not ideal, as patients often don't complete them properly or refuse to take the tests altogether. A colonoscopy, though effective at detecting CRC, is an invasive, uncomfortable procedure that requires two days off work, an unpleasant bowel preparation beforehand and puts patients at risk for significant complications.

What is clearly missing is a straightforward, patient-friendly entry point into CRC screening.

Fortunately, an exciting new technology, now on the immediate horizon, may provide the solution to bridge the gap in screening compliance that exists today and to reach the all important under screened population. This latest advance in cancer screening is an effective, safe and convenient blood-based colorectal cancer screening test that can easily be incorporated into a patient's annual check-up. Simple to administer, the test uses leading edge molecular technology to identify patients currently at risk for CRC. Effective screening means the right patients can be sent on for diagnostic structural examinations, like colonoscopy.

"A blood-based test is more familiar and could encourage more individuals to undergo screening," says Dr. Bernard Levin, an internationally-recognized expert in CRC screening. "This could lead to earlier detection of colorectal cancer, thereby reducing suffering and death."

By identifying higher risk patients up front, our limited colonoscopy resources can be focused on this group, potentially reducing wait lists and initiating early treatment in those with confirmed CRC.

1 Cancer Care Ontario. http://www.cancercare.on.ca/index_colorectalScreening.htm (2008)
2 National Institute of Health.
3 Colorectal Cancer Association of Canada. http://www.colorectal-cancer.ca/en/news-and-resources/fecal-test-deaths/ (2008).
4 Rabeneck L., Paszat LF. "A population-based estimate of the extent of colorectal cancer screening in Ontario." American Journal of Gastroenterology, 99(6):1141-4. (2004)

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