

A simple blood test for colon cancer

November 20 2008

People are often reluctant to undergo a routine but painful colonoscopy -- but the consequences can be fatal. According to the American Cancer Society, colon cancer is the third most common cancer found in American men and women and kills about 50,000 Americans every year.

"85% of those who develop colon cancer have no symptoms or family history," says Prof. Nadir Arber, a professor of medicine and gastroenterology, at Tel Aviv University's Sackler Faculty of Medicine. "Generally speaking, it's much harder to get these people to comply with taking the test."

To convince more people to undergo the potentially life-saving colonoscopy, Prof. Arber has developed a simple early-warning test that can detect colon cancer in the blood. Using biomarkers, it is the first test on the market that can detect cells of colon polyps — the precursors to colon cancer — in the blood, with a very high degree of sensitivity and accuracy.

This painless, non-invasive and inexpensive test could very well be a breakthrough of the decade.

An Attractive Diagnostic Step

"If we can identify those who are prone to cancer through a less invasive test, we can convince them to do the colonoscopy," leading to earlier detection and treatment, says Prof. Arber, who heads the Integrated Cancer Prevention Center at the Tel Aviv Souraski Medical Center.

Now being prepared for the market by Bio Mark Ltd., a subsidiary of Micromedic Technologies Ltd., Prof. Arber's "CD24" test could begin to save thousands of Americans' lives by as early as 2010. With the test, doctors can catch polyp growth in the colon in 80% of patients.

The American Cancer Society suggests that all Americans over the age of 50 receive periodic colonoscopies. With Prof. Arber's test, doctors will be able to screen patients for colon cancer quickly and easily as part of a routine blood test. While not 100% accurate, it will provide a convincing argument for patients to undergo the colonoscopy, and then polyp removal, if necessary.

The novel invention is based on testing CD24, the oncogene for colorectal cancer. It utilizes the fact that polyps in the colon emit biomarkers, which can be detected in the blood at very low levels. Recent studies show that the test can correctly identify adenomas, the polyps that convert to colon cancer, at a success rate of more than 80%.

Some patients forego colonoscopy not just out of fear or distaste, but due to its high cost. Here, too, the breakthrough is significant. While traditional colonoscopies cost about about \$1,500 per test, Prof. Arber's procedure is expected to cost much less — \$50 to \$100 per test.

Prevention Is Still the Best Medicine

Prof. Arber recommends a number of preventative steps against colon cancer, especially by those at risk. "There are some lifestyle choices people can make to prevent malignancies," he says. "Eating well, exercise, and avoiding smoking and drinking are very important."

Prof. Arber is also working on a drug that prevents the growth of polyps in the colon.

Source: American Friends of Tel Aviv University

Citation: A simple blood test for colon cancer (2008, November 20) retrieved 27 April 2024 from <https://medicalxpress.com/news/2008-11-simple-blood-colon-cancer.html>

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