

Embargo Monday November 20 2017 at 5:00 p.m. ET

Proteins may improve screening for colorectal cancer

AMSTERDAM, NOVEMBER 20 2017 – While colorectal cancer screening already saves many thousands of lives, there is still room for improvement. By looking at a combination of specific proteins rather than at a single blood protein alone, substantially more patients with colorectal cancer and advanced adenomas could be detected. The study describing these findings, conducted by researchers from the Netherlands Cancer Institute and VU University Medical Center, is published in the *Annals of Internal Medicine*.

A team led by professor Gerrit Meijer of the Netherlands Cancer Institute and professor Connie Jimenez of the VU University Medical Center used mass spectrometry to search for proteins that were present in stool specimens from persons with colorectal cancer or advanced adenomas, i.e. potential precursors of colorectal cancer, and which were virtually absent from stool specimens from controls. Current stool based tests as used in organised bowel screening programs are based on a single blood protein. In the present study, by using a combination of four specific proteins, the investigators were able to detect almost twice as many colorectal cancers and even five times as many advanced adenomas, compared to looking at hemoglobin alone.

Screening

The Dutch colorectal cancer screening program was started in 2014. Individuals aged from 55 to 75 are invited once every two years for screening using an immunochemical test for hemoglobin, a blood protein. Those who test positive are invited for an additional examination by colonoscopy.

New test

In the present study stool samples of almost four hundred individuals were examined. Based on these results, currently an antibody based assay is being constructed that will be prospectively evaluated in the context of the Dutch screening program. This process will take a few more years. Upon successful clinical validation, this new test then can be easily implemented, because it uses the same technology as the present screening test. Therefore, hardly any adjustment of the logistics of the current screening program would be needed.

Note to the editor

For more information or interview requests, please contact Monique Bottinga or Sanne Hijlkema, Science Information Officers at the Netherlands Cancer Institute (communicatie@nki.nl, +31 20 512 28 50) or Sonja van Galen, VUmc dienst communicatie (s.vangalen@vumc.nl, T: 020- 4444 186/ 06-513 88 119).

Publication will be accessible after expiration of the embargo:

<http://annals.org/aim/article/doi/10.7326/M17-1068>