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ASCO GI: Blood Test Detects Colorectal Cancer

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MedPage Today Action Points

- Caution interested patients that the blood test used in the study is not clinically available and needs further validation.
- Note that this study was published as an abstract and presented at a conference. These data and conclusions should be considered preliminary until published in a peer-reviewed journal.

Review

ORLANDO -- A novel blood test that measures CD24 protein levels may detect early colorectal cancer and precancerous adenomas, researchers found.

The investigational assay had 78.4%% sensitivity and 86.8% specificity for distinguishing patients with colorectal adenoma or cancer from healthy controls in a study led by Sarah Kraus, PhD, of Tel Aviv Souraski Medical Center in Israel.

Further validation for the biomarker would be needed before considering clinical use in surveillance, they cautioned here at the ASCO Gastrointestinal Cancers Symposium.

But the results were exciting and could represent "a very significant advance," commented Robert P. Sticca, MD, of the University of North Dakota in Grand Forks.

"It looks like it may be a very reliable marker for not only the early detection of colon cancer and even precancerous conditions, but also could be used for follow-up for patients who previously had cancer for recurrence," he said as moderator of a press briefing at which the results were discussed.

Colorectal cancer screening is effective, with early detection and treatment shown to improve survival.

However, colorectal cancer is often diagnosed at a late stage with poor prognosis, in part because of poor uptake of colonoscopy, Kraus said at the press briefing.

Unfortunately, there are no sufficiently accurate blood-based screening tests, he noted, although there have been attempts to develop them.

Her group had previously found that the CD24 protein -- expressed on the cell surface, where it plays a role in cell adhesion and metastasis -- was associated with development of colorectal cancer in a gene expression study.

So, with two independent cohorts, they tested whether CD24 could be a good biomarker for colorectal cancer.

The first cohort included 63 patients with colorectal cancer, 19 with adenoma, and 68 controls with a clean bill of health on colonoscopy. Of these 150 individuals, 143 were externally evaluated by a blinded investigator.

CD24 expression was nearly six-fold higher among adenoma and colorectal cancer cases than among controls, a significant difference. Levels were similar between the cancer and adenoma groups.

The second cohort included 73 subjects: 38 normal controls, 24 with colorectal adenoma, and 11 with colorectal cancer.

The test could distinguish colorectal cancer cases from controls with "relatively high" sensitivity and specificity (92.3% and 83.8%, respectively), Kraus said.

Its performance in detecting adenoma versus normal colonoscopy results was lower, 75.0% sensitivity and 89.2% specificity.

Kraus said her group is now testing this CD24 approach in a larger sample and developing an enzyme-linked immunosorbent assay (ELISA) that could be more widely used.

The researchers reported no conflicts of interest.

Primary source: Gastrointestinal Cancers Symposium

Source reference:

Kraus S, et al "Use of a simple blood test evaluating the level of CD24 protein to detect subjects with adenomas" *ASCO GI* 2010.

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