

# Cologuard stool DNA test accurate in screening for colorectal cancer in Alaska Native people

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Cologuard stool DNA testing for colorectal cancer was found to be an accurate noninvasive screening option for Alaska Native people, a population with one of world's highest rates of colorectal cancer, concluded researchers from the Alaska Native Tribal Health Consortium and Mayo Clinic.

The remote residence of many Alaska Native people in sparsely distributed communities across vast roadless regions creates a barrier to [screening](#) with conventional tools, such as a colonoscopy. Stool DNA testing, which was recently approved by the U.S. Food and Drug Administration (FDA), may offer a workable and effective screening method for this population. The research was published in the journal *Mayo Clinic Proceedings* and funded by a competitive grant from the Richard M. Schulze Family Foundation.

The stool DNA test is a noninvasive screening tool that identifies characteristic chemical changes in stool that signal the presence of cancer or precancerous polyps. The test, which requires no bowel preparation and no diet or medication restrictions, can be done from home via a mailed sampling kit.

"Stool DNA detects [colorectal cancer](#) and highest risk precancerous polyps with high accuracy, and its application within a screening program could translate into more effective prevention and control of

the leading cancer among Alaska Native people," says David Ahlquist, M.D., a study author and co-inventor of the stool DNA test.

In the study conducted out of Anchorage, Alaska, 661 Alaska Native participants submitted [stool samples](#) prior to a pre-scheduled screening colonoscopy, which served as the reference standard. Stool DNA testing was performed in separate laboratories by technicians unaware of the clinical source of specimens. The stool DNA test detected significantly more screen-relevant neoplasms than did the fecal immunochemical test. The stool DNA test detected 100 percent (10/10) of colorectal cancers. Stool DNA test sensitivity for [precancerous polyps](#) increased significantly in proportion to polyp size and the related risk of progression to cancer. Detection was 80 percent for the largest polyp group (those 3 centimeters or larger). For the important subset of patients with the sessile serrated polyp type, which accounts for approximately one-third of all cancers and is typically located on the far side of the colon, differences between stool detection rates were striking, say researchers. Stool DNA testing detected 67 percent of these polyps larger than 1 centimeter, compared to just 11 percent by fecal occult blood testing.

"The high detection rates of cancer and large polyps by stool DNA that we found in the Alaska Native population are remarkably similar to those demonstrated in the multicenter 10,000 patient screening study of the general U.S. population reported in the New England Journal of Medicine in 2014," says Dr. Ahlquist.

"We were pleased to see the impressive results from this important collaboration," states Robert Diasio, M.D., director of the Mayo Clinic Comprehensive Cancer Center. He adds, "Colorectal [cancer](#) mortality should be entirely preventable with use of effective screening tools. Yet, many Americans remain unscreened because of their reticence to undergo invasive procedures as well as to barriers of inconvenience or

limited access. The stool DNA test represents an accurate, patient-friendly and readily accessible new option that we hope will lead to improved screening participation rates in Alaska and across the country."

**More information:** *Mayo Clinic Proceedings*,  
[www.mayoclinicproceedings.org/article/S0025-6196%2815%2900803-4/abstract](http://www.mayoclinicproceedings.org/article/S0025-6196%2815%2900803-4/abstract)

Provided by Mayo Clinic

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