

**VIVIEN WILLIAMS:** Research shows that screening for colorectal cancer saves lives. That's because screening can catch cancer early, while it's still curable. But let's face it, having a colonoscopy to look for cancer or pre-cancerous polyps is not fun.

Doctors at Mayo Clinic have studied and improved upon a noninvasive screening test that requires no preparation or procedure. The test detects cancer or pre-cancerous polyps by measuring DNA in your stool. In this lab, a research team at Mayo Clinic, led by Dr. David Ahlquist, screens stool samples for evidence of colon cancer.

**DR. DAVID AHLQUIST:** If a cancer is detected by screening in somebody with no symptoms, the large majority of those cancers are completely curable.

**VIVIEN WILLIAMS:** Dr. Ahlquist's team improved existing stool test technology to make it highly effective at detecting early stage colon cancer and precancerous polyps. It called stool DNA testing. Unlike standard colonoscopy, which requires a bowel prep, sedation, and an invasive procedure, DNA stool testing is non invasive. All patients have to do is send a stool sample to the lab.

Here's how it works-- colon polyps and cancers shed DNA that ends up in your stool. In the lab, technicians extract DNA from the stool. From that DNA, they identify mutated genes from normal genes. An increased amount of mutated DNA indicates the presence of cancer or pre-cancer.

**FAREEDA TAHER:** That tells me that there's a percent of DNA on my PCR plate here which has mutations. And we know that the patient has a possible cancer there because of the number of mutations we find in his stool sample.

**VIVIEN WILLIAMS:** Most cancers shed mutated DNA. So Dr. Ahlquist says this technology may also be an effective screening tool for cancers found in other areas of the digestive tract, such as the mouth, bile duct, pancreas, or esophagus. Dr. Ahlquist's research team is actively exploring these expanded targets.

**DR. DAVID AHLQUIST:** But I think that the real value with stool DNA testing is that it detects the pre-malignant polyp for the first time with a non-invasive test, thereby really promising true cancer prevention.

**VIVIEN WILLIAMS:** Dr. Ahlquist says more research needs to be done to confirm his research findings, but he suspects stool DNA testing will become a widely used cost-effective way to screen for colon cancer. For Medical Edge, I'm Vivien Williams.