

New test may spot colon cancer early

Katie Couric, coanchor of NBC's "Today Show," has used her high visibility to draw national attention to colorectal cancer—the disease that killed her husband in 1998 but is treatable if caught early. Out of the public eye, scientists have been striving for more-accurate, noninvasive techniques to screen for colorectal cancer.

The most common clinical test looks for blood in a patient's feces, but this method has notable flaws. It catches just 30 to 40 percent of colorectal cancers and sounds a false alarm for 5 to 10 percent of people screened. Alternative tests look for cancer-causing mutations in the DNA of cells shed from the colon and rectum into feces. But most of these tests scan for mutations in just one of several relevant genes.

Now, a new technique—called a multitarget assay panel—that screens four vulnerable genes for mutations is about to undergo a large-scale clinical trial. Moreover, this new test searches for a fifth disease marker—long stretches of DNA from colon or rectal cells. Healthy colon cells that slough into feces commit suicide, or apoptosis, by cutting their DNA into little pieces. Cancer cells don't undergo apoptosis, so they have longer DNA segments.

Scientists at the Mayo Clinic in Rochester, Minn., and EXACT Laboratories in Maynard, Mass., recently tested the multitarget assay panel on 61 people, most between 60 and 80 years old. The participants were selected to represent cancerous, precancerous, and normal conditions as determined by their physicians. The researchers report their results in the November GASTROENTEROLOGY.

The test caught signs of colorectal cancer in 20 of the 22 participants with tumors and 9 of the 11 participants who had precancerous growths called polyps. Still, the multitarget assay panel sounded a false alarm for 2 of the 28 participants with healthy colons.

"In the long run, if [the new test] can predict early colorectal cancer, it will require fewer people to have colonoscopies," says Robert C. Kurtz, chief of the gastroenterology and nutrition service at Memorial Sloan-Kettering Cancer Center in New York City. To perform a colonoscopy, which costs about \$1,000, a physician inserts a flexible scope through the rectum to find and remove colon polyps (see story, p. 317).

"The new test has the potential to significantly reduce the morbidity and mortality of colorectal cancer," says David A. Ahlquist, a Mayo Clinic researcher and the paper's lead author. He will supervise a 3-year clinical trial in 2,900 people beginning early next year to explore that possibility.

—L. Sivit