



Colorectal Cancer Tests



By Michael Lawson, MD

Recent tests promoted by Raley's and Channel 13 appear to be a step backward.

THERE IS GROWING PUBLIC AWARENESS of colorectal cancer (CRC), partly due to celebrity endorsements. But there has been little public discussion about the scientific pros and cons of CRC screening compared with breast cancer screening as regards risks, false positives and false negatives

The current approach to CRC screening has focused on the removal of adenomatous polyps in an attempt to prevent the progression of the adenoma to cancer. There are no randomized controlled studies to show that this is an effective strategy, and the evidence is indirect.

In absolute terms, the benefit of CRC screening should be considered before widespread policies are adopted. The risk of dying from CRC is 2.5 percent without screening. This risk may be reduced by 23 percent by biennial fecal occult blood test (FOBT) screening.

Therefore, about 98 percent of patients will die of something else. No wonder there are concerns that not enough is being done for basic health care rather than costly preventative measures. Fatal cancers are often those that grow rapidly. There is an advantage to a screening program that provides several chances to diagnose and remove that neoplasm, rather than a once every 10-year test currently recommended by some for screening colonoscopy.

Patients have been studied prospectively in dietary intervention trials and have been followed closely with frequent colonoscopies. Evaluation of five large trials failed to yield evidence of any significant reduction in CRC incidence, likely due to more aggressive interval neoplasms arising in subtle depressed lesions not appreciated until they reach a critical mass that can be too late for effective intervention.

The sensitivity of FOBT is only 50-60 percent for one-time use and their impact on mortality is modest. Although the sensitivity can be increased using rehydration, this leads to variability in the reaction with a high number of false-positives subjecting patients to unnecessary further invasive investigations. This invalidates the method as a screening procedure.

FOBT testing using the guaiac smear is being replaced in many countries and some US facilities by a quantitative fecal immunochemical tests (FIT) that detects human hemoglobin using sensitive and specific techniques. These provide flexibility for the end-user, as a desired sensitivity/specificity ratio can be selected that is feasible for available colonoscopic resources.

The EZ detect test recently offered by Raley's, in a promotion with Channel 13, is a guaiac-impregnated paper placed in the toilet bowl. The prototype was developed 30 years

ago and it suffers from the same problems as FOBT. The test has not been validated in blinded prospective clinical studies and would appear to be a backward step in CRC screening.

The gold standard of successful screening methods is to reduce disease-specific mortality. We need to question our current approach and better define high risk patients using more sensitive and specific screening tests. Such risk stratification could be followed by tailored chemoprevention that can result in up to 90 percent reduction of recurrent advanced neoplasms in high risk patients.

Michael.J.Lawson@kp.org

Sierra Sacramento Valley Medical Society
5380 Elvas Avenue #100 • Sacramento, CA 95819
916.452.2671 PH • 916.452.2690 FX • Email: info@ssvms.org

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