

Appendix C:

Clinician's Reference: Fecal Occult Blood Testing (FOBT) for Colorectal Cancer Screening

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Guidelines from the American Cancer Society, the US Preventive Services Task Force, and others recommend high-sensitivity fecal occult blood tests (FOBT) as one option for colorectal cancer screening. This document provides state-of-the-science information about guaiac-based FOBT and fecal immunochemical tests (FIT).

- * Colorectal cancer screening with FOBT has been shown to decrease both incidence and mortality in randomized controlled trials.
- * High-sensitivity FOBT detects colorectal cancer at relatively high rates.
- * Modeling studies suggest that the years of life saved through a high-quality FOBT screening program are essentially the same as with a high-quality colonoscopy-based screening program.
- * Access to colonoscopy and other invasive tests may be limited or non-existent for many patients. In addition, some adults prefer less invasive tests.

All of these elements make FOBT a reasonable choice for patients.

Recent advances in stool blood screening include the emergence of new tests and improved understanding of the impact of quality factors on testing outcomes.

Two main types of FOBT are available – guaiac-based FOBT and FIT.

Guaiac-based FOBTs are the most common form of stool tests used in the US. Modern high-sensitivity forms of the guaiac-based test (such as Hemoccult Sensa) have much higher cancer and adenoma detection rates* than older tests (Hemoccult II and others).

Guaiac-based FOBT version	Sensitivity for cancer	Sensitivity for adenomas
Hemoccult Sensa (high-sensitivity)	50% – 79%	21% – 35%
Hemoccult II	13% – 50%	8% – 20%

These differences are so significant that screening guidelines now specify that only high-sensitivity forms of guaiac-based tests (like Hemoccult Sensa) should be used for colorectal cancer screening. Hemoccult II and similar older guaiac-based tests should no longer be used for colorectal cancer screening.

FITs also look for hidden blood in the stool, but these tests are specific for human blood and guaiac-based tests are not. There are many brands of FIT sold in the US, and there is no consensus that one brand is superior to another. There is evidence that patient adherence with FIT may be higher than with guaiac FOBT; this may be a result of preparation needed by patients (no dietary and medication restrictions, only 1 or 2 specimens required with some brands).

FIT and guaiac-based FOBT	Sensitivity for cancer	Sensitivity for adenomas
Immunochemical tests (FIT)	55% – 100%	15% – 44%
High-sensitivity guaiac-based FOBT (Hemoccult Sensa)	50% – 79%	21% – 35%

When done correctly FIT and high-sensitivity guaiac-based FOBT have similar performance*; both are significantly better than Hemoccult II and similar older tests.

*Sensitivities cited are based on review of studies that used colonoscopy as the reference standard to determine FOBT performance characteristics.

