Should Screening Techniques for Colorectal Cancer All Have an 'A' Recommendation?

Yes: All Conventional Screening Techniques Should Have an 'A' Recommendation

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Recently, the U.S. Preventive Services Task Force (USPSTF) updated its recommendation on screening for colorectal cancer. The final recommendation has been released, and it again makes an A recommendation for colorectal cancer screening in persons 50 to 75 years of age.[1] An A recommendation means that there is high certainty that the net benefit is substantial. I agree with that general assessment.

The previous recommendation from 2008 confined the A recommendation to the following three tests: annual fecal occult blood testing (FOBT), colonoscopy every 10 years, or the combination of flexible sigmoidoscopy every five years and FOBT at least every three years.[2] The current 2016 guidelines extend the recommendation to include annual fecal immunochemical testing (FIT), the combination of FIT and fecal DNA testing (FIT-DNA) every one or three years, flexible sigmoidoscopy every five years, and computed tomographic (CT) colonography every five years as additional options.[1] The A recommendation now applies to screening for colorectal cancer in general, without advocating for a specific test. The USPSTF provides a table laying out the pros and cons of each method, leaving it to family physicians and their patients to make a decision about which specific test to use. The table is available at https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/colorectal-cancer-screening2#tab.

The level of evidence differs for each of these screening tests, with only the older guaiac-based fecal occult blood tests (gFOBT) and flexible sigmoidoscopy showing evidence of reduced colon cancer mortality from randomized controlled trials.[3-5] Evidence for colonoscopy, FIT, FIT-DNA, and CT colonography is primarily based on observational studies and studies of test accuracy. That is where it gets tricky. It is reasonable to assume that the mortality reduction shown in studies using older technologies such as gFOBT would be the same or greater when using a more sensitive and specific test. For example, FIT is more sensitive and specific than gFOBT, so it will detect more cancers, detect them earlier, and will not result in more false alarms and unnecessary colonoscopies because of the greater specificity. On the other hand, FIT-DNA is more sensitive than FIT alone but is less specific, resulting in about twice as many colonoscopies per cancer detected (22 vs. 11), an important potential harm.[6]

The figure in the USPSTF recommendation statement clearly shows that the benefit for all of the recommended methods is huge: 221 to 270 life-years gained per 1,000 persons screened, far greater than the life-years gained by screening for any other cancer or infections such as hepatitis B,

This is one in a series of pro/con editorials discussing controversial issues in family medicine.

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▶ See related USPSTF recommendation statement at http://www.aafp.org/afp/2017/0215/od1.html and Putting Prevention into Practice at http://www.aafp.org/afp/2017/0515/p653.html.

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hepatitis C, and human immunodeficiency virus.[1] The difference between the recommended screening tests for colorectal cancer lies in the balance of burdens and harms: FIT-DNA and especially colonoscopy result in a significantly higher burden in terms of lifetime colonoscopies than all of the other methods. And, although the USPSTF is not allowed to consider cost, these methods are also much more expensive than alternatives such as annual FIT. For example, FIT costs about $10, whereas FIT-DNA costs more than $500 and is recommended to be performed as often or nearly as often.

The American Academy of Family Physicians' decision to downgrade colorectal cancer screening to a B recommendation may create confusion, and thus risk decreasing the progress being made to extend screening to all Americans 50 to 75 years of age. It is hard to find a test with greater net benefit than colorectal screening, and the extensive modeling studies show that no matter which method you choose, there is a significant benefit of about 250 life-years gained per 1,000 persons screened.[7] The harms and costs vary among methods, and one could perhaps argue that FIT-DNA and colonoscopy should be a B recommendation because of their greater potential harms. But the other tests are clearly "home runs" for cancer screening, and we need to emphasize the message that regardless of which test is used, patients should get screened. For these reasons, I fully endorse the USPSTF's A grade for all recommended screening tests for colorectal cancer.

EDITOR'S NOTE: Dr. Ebell and Dr. Lin, the author of the accompanying editorial, have both been affiliated with the USPSTF—Dr. Ebell as a member for four years, and Dr. Lin as a medical officer for the USPSTF program at the Agency for Healthcare Research and Quality for four years. They have also been longtime *AFP* medical editors. Dr. Lin is a member of the AAFP Commission on Health of the Public and Science, which decided to assign a B level rating to colorectal cancer screening, differing from the USPSTF. Thus, we have two knowledgeable evidence experts who have looked at the same evidence and reached somewhat different conclusions. We present their views in this pro/con format so that readers can see their arguments and decide for themselves.

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