## **Early Detection Does Not Extend Lifespan: Practicing Health-Promoting Habits Does**

Pamela A. Popper, President Wellness Forum Health

Cancer is the second leading cause of death in the U.S. and will soon overtake heart disease as the leading killer of Americans. We have all lost family members and/or friends to cancer, and some of those deaths followed gruesome treatments that seemed, at times, to make patients sicker instead of better. As for how to prevent cancer and premature death, the mantra "Early Detection Saves Lives" has been repeated for decades by public health, non-profit organizations, and medical groups and institutions. The problem is that it's not true, and belief in screening has diverted attention from what would really make a difference – the adoption of habits shown to prevent cancer.

A new systematic review and meta-analysis including over 2 million patients adds to the body of evidence showing that faith in screening programs has been misdirected. The researchers concluded that with the exception of colorectal cancer screening with sigmoidoscopy, "current evidence does not substantiate the claim that common cancer screening tests save lives by extending lifetime." And even sigmoidoscopy only extends life by an average of 110 days.<sup>1</sup>

There was no significant difference in life extension for mammography (0 days), PSA testing (37 days), colonoscopy (37 days), fecal occult blood testing every other year (0 days) and CT lung cancer screening (107 days). The reported reduction in all-cause mortality for screened vs non-screened individuals was negligible – 1% or less.

The authors reported that this does not mean that *no one* achieves extended life with screening, but that consideration should be given to the fact that while some individuals benefit, there are risks associated with screening such as colon perforation during colonoscopy, or myocardial infarction following radical prostatectomy. Also, screening tests can lead to overdiagnosis which then leads to unnecessary and potentially harmful treatment for cancers that are unlikely to cause premature death. Additionally, the more screening tests performed, the more likely there will be false positive results which can cause great anxiety and more expense for follow-up testing.

In an accompanying opinion piece, lead author Bretthauer and colleagues state that even with significant evidence of overdiagnosis and harm, it is difficult if not impossible to reduce or end screening programs "even when research has failed to document significant benefits." The reason is that following the evidence threatens powerful stakeholders. They wrote:

"Cancer screening guidelines are often developed by screening professionals, screening organizations, and patient representatives, with their vested interests. We propose that screening guidelines should not allow individuals or organizations with

clinical, financial, or intellectual interests in leading roles of guideline development. This would improve quality and trustworthiness of recommendations."

They also wrote, "Healthcare representatives and experts must be honest, transparent, and dispassionate about the benefits and harms of screening, expressed in a way that allows real shared decision-making."<sup>2</sup>

The researchers also looked at outcomes for multicenter early detection blood tests (MCED), which involves testing blood samples for pieces of DNA or proteins from cancer cells. These tests are quite non-specific and a positive test only indicates increased likelihood that there is some cancer somewhere in the body. A positive test is an indication for more tests, such as imaging, to determine where the cancer is.

There are several tests in development, with one available now by prescription at a cost of \$949 per person. The makers of the test claim that blood tests are not a replacement for existing tests but rather to be used in addition to these screening tests.<sup>3</sup> There is no evidence of efficacy at this time, but considerable enthusiasm, which means that another useless and potentially harmful screening test is likely to become widely used, at an estimated cost of \$100 billion per year if administered annually to every American age 50 and older.

Many prominent health professionals agree that enthusiasm for cancer screening tests is misdirected. Gilbert Welch MD, who has been outspoken about the limitations of population screening for cancer for decades, and David Carr MD state in a Special Communication accompanying the article that a "rigorous demonstration of benefit – that patients are living longer or living better" should be required before blood tests for cancer are widely adopted. They write that one of the problems with screening is that while only a few benefit, "all can be potentially harmed."

In an editorial accompanying the review, Rita Redberg MD and colleagues urged caution in order to "avoid rushing a dangerous blood test to market." They also stated that "Such a study unfortunately never occurs after marketing approval," and add that while "...the potential for early cancer detection may have broad appeal, evidence from [randomized clinical trials] that screening reduces all-cause mortality with acceptable levels of harm before MCED tests are approved, covered, or adopted into clinical practice."

## The bottom line:

There are no laws requiring accurate disclosure about risks and benefits of cancer screening tests, and most doctors have been brainwashed to believe in screening. A further complication is that medical institutions profit from screening tests – both from billing for the tests themselves, and from treatment for the cancers that are diagnosed as a result of screening.

Cancer is a preventable disease, and the false promise that regular screening will prevent death from cancer and prolong life distracts from strategies that really matter: adopting a health-promoting diet, maintaining healthy weight, limiting alcohol consumption, exercise, sleep, and addressing stress.

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<sup>&</sup>lt;sup>1</sup> Bretthauer M, Wieszczy P, Loberg M et al. "Estimated Lifetime Gained With Cancer screening Tests: A Meta-Analysis of Randomized Clinical Trials." *JAMA Intern Med* published online August 28 2023 doi:10.1001/jamainternmed.2023.3798

<sup>&</sup>lt;sup>2</sup> Adami HO, Kalager M, Bretthauer M. "The Future of Cancer Screening – Guided Without Conflicts of Interest." *JAMA Intern Med* published online August 28 2023 doi:10.1001/jamainternmed.2023.4064

<sup>&</sup>lt;sup>3</sup> https://www.cancer.org/cancer/screening/multi-cancer-early-detection-tests.html

<sup>&</sup>lt;sup>4</sup> Welch HG, Dey T. "Testing Whether Cancer Screening Saves Lives: Implications for Randomized Clinical trials of Multicancer Screening." Special Communication *JAMA Intern Med* published online August 28 2023 doi:10.1001/jamainternmed.2023.3781

<sup>&</sup>lt;sup>5</sup> Dhruva SS, Smith-Bindman R, Redberg RF. "The Need for Randomized Clinical Trials Demonstrating Reduction in all-Cause Mortality With Blood Tests for Cancer Screening." *JAMA Intern Med* published online August 28 2023 doi:10.1001/jamainternmed.2023.3610