

Downside of PSA Testing

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One of today's most contentious medical debates centers on cancer screening, the benefits of which seem anything but debatable. Indeed, earlier detection, many believe, logically must give patients an advantage in fighting the disease. In fact, the evidence does not always support this assumption. Prostate cancer is a case in point.

Screening entails the mass testing of individuals of a certain age and gender, regardless of family history or personal health, to identify a potential disease state. For screening to be useful, the test or procedure must readily identify the disease in question, and the subsequent treatment must result in some measurable benefit. The screened population must be better off than the non-screened population.

For some health issues — such as elevated cholesterol — screening yields positive results. A simple blood test measures the amounts of good and bad cholesterol, making it easier to detect cardiovascular disease, which could lead to heart attacks or strokes. Those who are screened, diagnosed and treated experience a lower rate of cardiovascular events.

Screening for prostate cancer, too, requires a blood test — the PSA test. Elevated PSA levels would suggest the presence of prostate cancer, even if no physical abnormalities were detected. At this point, a diagnosis can be made. If positive, cancer treatment, such as surgery or radiation, will follow, and, one hopes, the patient will be cured.

Supporters of screening argue that it helps to detect and treat cancer earlier, when the chances of curing it are highest. Moreover, younger patients, at least, can better withstand the side effects of cancer treatment. Proponents also contend that the two-decade decline in the overall incidence of deaths from prostate cancer is the result of increasingly widespread PSA testing. Indeed, they encourage more vigorous screening programs.

But the benefits of screenings are not as straightforward as supporters claim. To be sure, at-risk men — for example, those with a family history of prostate cancer or men with enlarged prostates who are treated with 5-alpha-reductase inhibitors — may want to consider getting tested.

For most healthy men, however, the U.S. Preventive Services Task Force has publicly advised against widespread PSA tests. Several well-managed, randomized, long-term human trials have shown almost no survival benefit for those who are screened, diagnosed and treated, compared to those who were never screened.

Of the studies cited by the task force, one study conducted in Europe showed a minor benefit in a subset of men with no significant quality-of-life improvement. Another, conducted in the United States, showed no evidence that PSA screening improved prostate cancer survival rates. Because the average age at diagnosis is 71-73, men are likely to die from other causes before prostate cancer claims their life. And there is no credible evidence that low-grade prostate cancer uniformly progresses to higher-grade cancers, so early treatment is not essential.

Moreover, cancer treatment often carries serious side effects, including urinary incontinence, erectile dysfunction, and, in those who undergo radiation, inflammation of the lower rectum or bladder. Given that many patients diagnosed with prostate cancer as a result of the PSA test would never suffer any symptoms, such consequences are difficult to justify.

Yet many refuse to give up screening. Given this, an active surveillance program may best address the most serious consequence of excessive screening: premature, overly aggressive treatment.

In an active surveillance program, a patient diagnosed with a PSA-prompted biopsy delays treatment. Instead, he is closely monitored with various follow-up tests. Only when signs indicate that the cancer is becoming dangerous is treatment initiated. While this approach is still being studied, the results so far appear promising. Men who participate in active surveillance programs are 14 times more likely to die of a cause unrelated to prostate cancer.

As evidence tilts the balance away from widespread PSA testing, a new screening test or biomarker is urgently needed that can distinguish effectively between potentially life-threatening prostate cancers and less dangerous forms. Likewise, less risky treatments are crucial.

Active surveillance programs are an encouraging prospect for minimizing the negative consequences of PSA testing. But without vastly improved screening practices, prostate cancer screening is unlikely to help — and can even do serious harm.

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