

ADVANCES IN ONCOLOGY

Current Developments in the Management of Solid Tumor Malignancies

Section Editor: Clifford A. Hudis, MD

Prostate Cancer In Focus

Prostate-Specific Antigen (PSA) Screening in Older Men



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H&O How common is PSA screening in older men?

LW Recent surveys suggest that prostate-specific antigen (PSA) screening rates are greater than 50% in men older than 70 years. Medicare began to cover PSA screening in 2000, and the use of PSA screening has increased over time. A study I performed in 2003 showed that more than half of veterans ages 70 and older had undergone PSA screening within the previous year.

H&O What have previous data suggested about PSA screening in older men?

LW There are no data regarding whether PSA screening works in older men. There have been 2 large, randomized trials of PSA screening: the US PLCO (Prostate, Lung, Colorectal, and Ovarian) Cancer Screening Trial and the ERSPC (European Randomized Study of Screening for Prostate Cancer) study, but they did not include men older than 75. The primary results of these trials differed: the ERSPC study showed a benefit for PSA screening, and the PLCO trial did not. There is some thought that the benefits seen in the ERSPC study can be extrapolated to the older population, but I believe this inference is uncertain. Although the primary outcome differed in these 2 trials, both seemed to suggest that any reduction in the risk of death from prostate cancer would not be seen until 10 years after the PSA screen. So, there is a long lag time to benefit.

Other studies have shown that there are real harms to PSA screening, especially in older men. According to some estimates, the majority of prostate cancers found by PSA screening in older men are overdiagnosed, meaning that PSA screening is finding prostate cancers that would never have grown or caused any problems in the man's lifetime. Once the cancer is found by screening, however, treatment is usually initiated, and the patient may experience side effects for something that would never have caused a problem.

H&O Could you please describe your study on downstream outcomes of PSA screening in older men?

LW This large cohort study included 295,645 men ages 65 years and older who had undergone PSA screening in the Veterans Affairs (VA) healthcare system in 2003. These men were followed for the next 5 years. The patient characteristics were consistent with an older veteran population. The mean age was 73 years, and most patients were white.

In approximately 8.5% of the population, the PSA screening test results were abnormal (defined as a PSA greater than 4 ng/mL). Throughout the next 5 years, only 33% of the men with an abnormal PSA underwent a prostate biopsy. Among these men, 63% were ultimately diagnosed with prostate cancer (Figure 1). Many of the men had undergone more than 1 biopsy before prostate cancer was diagnosed. Once the diagnosis was made, more than 75% of men were treated within a year by either radiation, prostatectomy, or hormonal therapy.

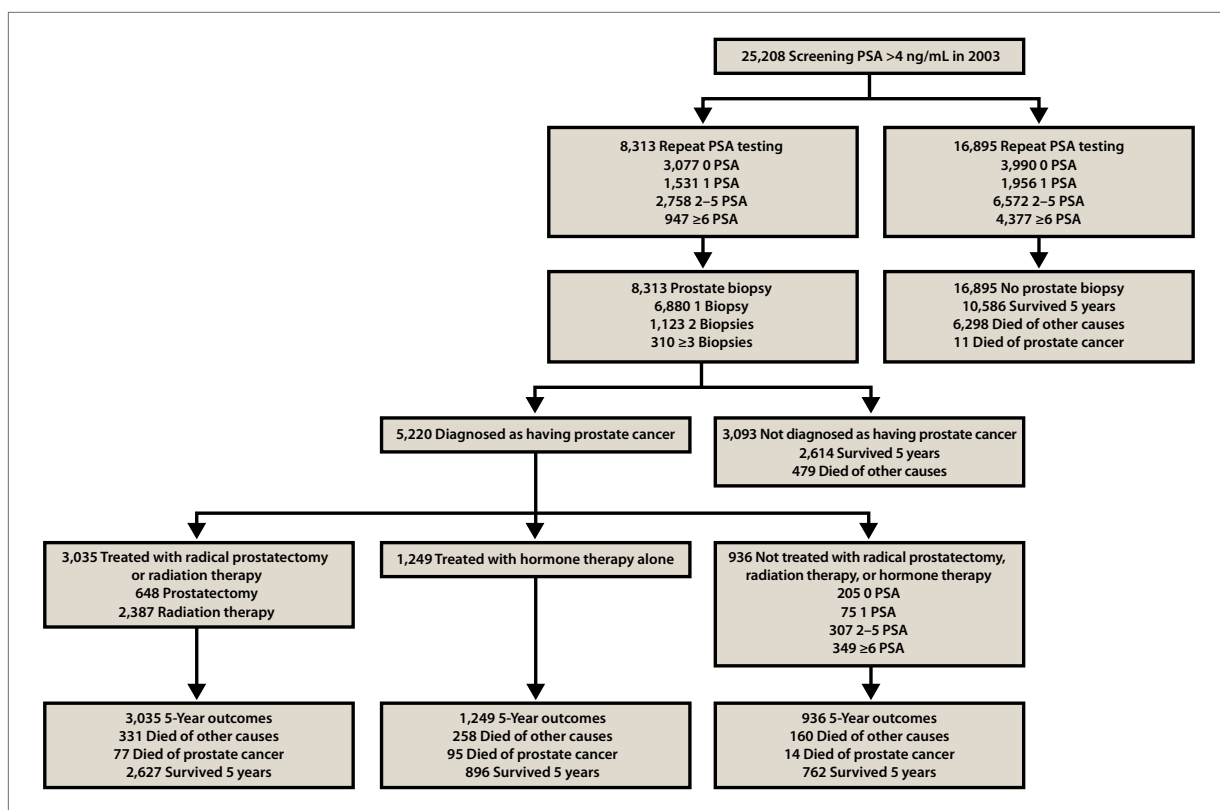


Figure 1. Downstream outcomes following a screening prostate-specific antigen (PSA) result exceeding 4.0 ng/mL in men 65 years or older. Republished with permission from Walter LC, Fung KZ, Kirby KA, et al. Five-year downstream outcomes following prostate-specific antigen screening in older men. *JAMA Intern Med.* April 15, 2013. © 2013 American Medical Association. All rights reserved.

Among the men who underwent biopsy, 6% experienced severe or significant complications. Among the men who underwent treatment, 14% developed incontinence and 14% developed some type of impotence.

H&O Were there any differences in the older patients versus the younger patients in the study?

LW The youngest patients in the study were ages 65–69, and the oldest group was older than 85. We found that as men aged, they were more likely to have abnormal results on a screening PSA, and they were less likely to undergo a biopsy after an abnormal PSA. Interestingly, when these older patients did undergo a biopsy, they were more likely to be diagnosed with cancer.

After a diagnosis of prostate cancer, treatment rates did not differ according to age. Rates of 5-year all-cause mortality were lower in older men than younger men.

H&O What were the study limitations?

LW We wanted to be very comprehensive regarding interventions that followed the PSA screening test. Because some

veterans receive care outside the VA system, through Medicare, we looked at claims both within the VA system and in Medicare. Data from Medicare do not provide the same level of detail as data from the VA, so data concerning the cancer characteristics for men who had their prostate cancer diagnosed through Medicare are less complete.

Many men fail to report symptoms of incontinence and impotence to their doctors. To compensate, we looked at factors such as purchase of incontinence supplies or prescriptions for medicines to treat impotence. Still, it is likely that our reported rates of incontinence and impotence are lower than if we had asked men directly about these problems.

H&O What do your study findings suggest about PSA screening in older men?

LW One of the main reasons we performed this study was to determine how often PSA screening leads to other interventions. Although PSA screening is just a blood test, it can lead to many downstream events. A man who is considering PSA screening should think about whether he would pursue a prostate biopsy if his screen-

ing results are abnormal. New 2013 American Urological Association guidelines recommend that if older men wish to be screened, they should pursue prostate biopsy only if their PSA is above 10 ng/mL. Using a higher PSA threshold to define abnormal will identify older men more likely to have high-risk cancers that are more likely to benefit from treatment.

H&O What factors should contribute to the decision of whether an older man should undergo PSA screening?

LW Life expectancy and overall health are important. As I mentioned earlier, there is a 10-year lag period between when the screening test is performed and when there is a chance to benefit from the results. PSA screening can be an unnecessary distraction in older men with serious conditions, such as severe dementia, end-stage renal disease, and end-stage lung disease, that require immediate medical care. In addition, the presence of comorbidities

increases the likelihood that complications from biopsies and treatments associated with prostate cancer will occur.

In older men who are healthy, it is important to consider patient preferences. Clinicians should discuss the potential benefits and harms in order to include the patient in the decision-making process.

Suggested Readings

Walter LC, Fung KZ, Kirby KA, et al. Five-year downstream outcomes following prostate-specific antigen screening in older men. *JAMA Intern Med.* April 15, 2013. doi:10.1001/jamainternmed.2013.323. [ePub ahead of print]

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