PSA Screening Among Elderly Men With Limited Life Expectancies

Louise C. Walter, MD
Daniel Bertenthal, MPH
Karla Lindquist, MS
Badrinath R. Konety, MD

Most screening guidelines do not recommend prostate-specific antigen (PSA) screening in elderly men with limited life expectancies because potential harms of screening, which occur immediately, outweigh potential benefits, which are not expected to occur until several years in the future.1-6 For example, the American Cancer Society and the American Urological Association recommend annual PSA screening for average-risk men aged 50 years and older if they have more than a 10-year life expectancy, which is usually defined as having greater than a 50% probability of surviving 10 years.1,2 The US Department of Veterans Affairs (VA) and the US Preventive Services Task Force conclude that evidence is insufficient to recommend routine PSA screening, and men with a low probability of surviving 10 years are unlikely to benefit from screening even under favorable assumptions.3,4 All agree that currently there is no conclusive evidence that PSA screening reduces prostate cancer mortality at any age or life expectancy and convincing evidence of benefit is unlikely to ever exist for elderly men because ongoing randomized trials of PSA screening have excluded men older than 75 years.7 It is these men, especially those in poor health, who will probably experience only the adverse effects of screening, such as additional procedures due to false-positive results, psychological distress, or the morbidity associated with treating clinically insignificant prostate cancer detected by screening.1,3

Although Medicare began coverage of screening PSA in 2000, little information is available on actual PSA screening practices in elderly men. National surveys have found that self-reported PSA screening rates decrease among men aged 80 years and older after peaking among men in their 70s.8,9 However, screening rates vary. For example, reports of PSA screening in the past year among men aged 80 years and older range from 26% in the 2000 National Health Interview Survey to 56% in the 2001 Behavioral Risk Factor Surveillance System.8,9 Self-reports also consistently overestimate the extent of actual screening.8,10 In addition, results from surveys have been mixed regarding associations between PSA screening and mortality.8,11

Conclusions Prostate-specific antigen screening rates among elderly veterans with limited life expectancies should be much lower than current practice given the known harms of screening. More attention to prognosis is needed when making screening PSA recommendations to elderly men.

Context Most guidelines do not recommend prostate-specific antigen (PSA) screening in elderly men who have limited life expectancies because the known harms of screening outweigh potential benefits. However, there are no large-scale studies of actual PSA screening practices in elderly men, according to life expectancy.

Objective To characterize the extent of PSA screening among elderly men, including those with limited life expectancies.

Design, Setting, and Participants Cohort study of 597 642 male veterans aged 70 years and older who were seen at 104 US Department of Veterans Affairs facilities during both 2002 and 2003, without a history of prostate cancer, elevated PSA, or prostate cancer symptoms. Charlson comorbidity scores were used to stratify men into 3 groups ranging from best health (score=0) to worst health (score ≥4).

Main Outcome Measure Receipt of PSA testing during 2003 was based on US Department of Veterans Affairs data and Medicare claims.

Results In 2003, 56% of elderly men had a PSA test performed. Although PSA screening rates decreased with advancing age, within each 5-year age group the percentage of men who underwent a PSA test did not substantially decline with worsening health. For example, among men aged 85 years and older, 34% in best health had a PSA test compared with 36% in worst health. In multivariate analyses, many nonclinical factors, such as marital status and region of the country, had a greater effect on PSA screening than health, and screening rates exceeded 60% for some subgroups of men in worst health.

PSA, prostate-specific antigen; VA, United States Department of Veterans Affairs.
health. Poor self-reported health has been associated with lower rates of screening, whereas the number of self-reported chronic diseases has little effect on PSA screening rates in older men.8,11,12

Therefore, we conducted this study to determine PSA screening rates among elderly veterans stratified into subgroups based on age and a validated measure of health status that is strongly predictive of life expectancy. We examined VA data and Medicare claims for men aged 70 years or older who were seen at 104 of 127 total VA facilities across the United States to characterize the extent of PSA screening among elderly men, including those with limited life expectancies.

METHODS

Data Source and Participants

Data for this cohort study were obtained from the VA Austin Automation Center, which contains data from various sources that were all provided by fiscal year (October 1-September 30).13 Data sources included the National Patient Care Database (all inpatient and outpatient claims within the VA),14 Fee Basis Files (claims for non-VA services for which the VA paid),19 and the 2003 VA Decision Support System National Data Extracts Laboratory Results Data Set (results of selected laboratory tests, such as PSA, which was available for 104 of the 127 VA facilities).16

In addition, we used linked Medicare claims from the VA Information Resource Center to capture services provided to our cohort by Medicare.17 Race/ethnicity, based on what was recorded in Medicare administrative data, was assessed in this study because prior literature has shown that black men are less likely to undergo PSA screening.

Based on these data sources, there were 1,086,827 men aged 70 years and older who had at least 1 outpatient visit in both fiscal years 2002 and 2003 at 104 VA facilities. We excluded 172,457 men (16%) enrolled in Medicare managed care for any part of this 2-year period because they lacked Medicare claims and 36,232 men (3%) who died before the end of 2003 because they did not have equal opportunity for PSA testing. In addition, to create a cohort of screen-eligible men, we used VA and Medicare inpatient and outpatient claims during the 3-year period prior to the start of 2003 to exclude 267,676 men (25%) with a history of prostate cancer, prostatectomy, androgen deprivation therapy, or elevated PSA (FIGURE 1). We also used claims to exclude 12,820 men (1%) who had symptoms (eg, hematuria, back pain, weight loss, urinary obstruction) during the 3 months before their index PSA was performed, because this PSA was considered a diagnostic test rather than a screening test. This analysis is based on a final screen-eligible cohort of 597,642 men.

Data Collection and Measurement

Outcome Variables. Receipt of PSA during fiscal year 2003 (October 1, 2002-September 30, 2003; hereafter denoted as 2003) was assessed within the VA health care system and within Medicare, since most VA users aged 65 years and older are also enrolled in Medicare.18 PSA testing within Medicare was identified by Current Procedure Terminology (CPT) codes G0103 or 84153 through linked Medicare payment data (hospital outpatient and physician/supplier files) containing outpatient claims for each patient.19 PSA use within the VA system was defined by an outpatient PSA in the 2003 VA Decision Support System National Data Extracts Laboratory Results Data Set, which extracts PSA results from each facility.20 We confirmed the completeness of PSA extraction by comparing our data with an independently extracted VA Decision Support System Laboratory Data Set.16 Less than 2% of PSA tests recorded in the Laboratory

Figure 1. Exclusions Used to Define the Final Cohort of Elderly Men Eligible for PSA Screening

1,086,827 Men Aged 70 y With 2+1 Outpatient Visit at 104 VA Facilities During Both 2002 and 2003

489,185 Excluded

208,699 Lacked Equal Opportunity for PSA Claims

172,457 In Medicare Managed Care

36,232 Died in 2003

267,676 Ineligible for a Screening PSA in 2003 Due to Prior History

132,980 Prostate Cancer (ICD-9 185 or V1046)

16,513 Prostatectomy (ICD-9 60.21, 60.29, 60.3-60.6, 60.61, 60.62, 60.69; CPT 55810, 55812, 55815, 55801, 55821, 55831, 55842, 55845)

264 Androgen Deprivation Therapy (CPT J1950, J9202, J9217, J9218, J8219)

117,919 History of Elevated PSA (ICD-9 790.93)

12,820 Had Nonscreening Diagnostic PSA in 2003 (Symptoms During 3 Months Prior to PSA Testing)

607 Urinary Obstruction (ICD-9 699.6)

4022 Hematuria (ICD-9 599.7)

2031 Prostatitis (ICD-9 601-601.9)

851 Other Disorders of the Prostate (ICD-9 602-602.9)

1919 Unexplained Weight Loss (ICD-9 783.21)

4280 Back Pain (ICD-9 724.5)

597,642 Men Included in Final Screen-Eligible Cohort

CPT indicates Current Procedural Terminology Code; ICD-9, International Classification of Diseases, Ninth revision; PSA, prostate-specific antigen. Prior history was defined by searching Veterans Affairs (VA) and Medicare inpatient and outpatient claims during the 3 years prior to the start of fiscal year 2003 (October 1, 1999-September 30, 2002). For symptoms experienced by the 12,820 men who had nonscreening diagnostic PSA in 2003, numbers exceed 12,820 because some men experienced more than 1 symptom. All other categories are mutually exclusive.

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Data Set were not in the Laboratory Results Data Set for each of the 104 facilities in this study. We used the VA Decision Support System National Data Extracts Laboratory Results Data Set because it provides PSA results used in other work.

To validate that PSA tests in our cohort were primarily sent for screening purposes, we audited a random sample of 100 medical charts of men in our cohort stratified by age who underwent a PSA test at the San Francisco VA. We found that 87% of PSA tests were screening tests performed in asymptomatic men, ranging from 96% of tests in men aged 70 to 74 years to 80% of tests in men aged 85 years or older. Most screening PSA tests were listed in progress notes as “health care maintenance,” “routine laboratory work ups,” or had no documented reason. Five charts indicated the screening PSA test was sent prior to starting saw palmetto or testosterone, and 4 charts documented that the patient requested the test. Of the 13 nonscreening PSA tests, 8 tests were performed to follow up an abnormality from prior screening (eg, PSA level > 4 ng/mL or abnormal digital rectal examination result in the prior 5 years), and only 5 tests were performed to work up symptoms, which included weight loss, hematuria, and obstructive urinary symptoms.

### Predictor Variables

Age at the start of 2003 was categorized into 4 groups: 70 to 74 years, 75 to 79 years, 80 to 84 years and 85 years or older. Health status was defined by the Charlson Comorbidity Index, which is a summary measure of 19 chronic diseases selected and weighted according to their association with mortality. We used the Deyo adaptation of the Charlson Comorbidity Index for administrative data. Charlson scores were calculated from VA and Medicare inpatient and outpatient claims during the 12 months prior to the start of 2003. Men were categorized as being in best health if they had a Charlson score of 0, average health if they had a Charlson score of 1 through 3, and worst health if they had a Charlson score of 4 or more. These cutoffs were chosen to assess how extremes in health status influence screening. Other factors known to influence the use of cancer screening were also ascertained from VA and Medicare administrative data and linkage to the 2000 US Census (Table 1).

The Committee on Human Research at the University of California, San Francisco, and the Committee for Research and Development at the San Francisco VA approved the study.

### Analyses

We computed the percentages of men who underwent a PSA test in 2003 according to baseline characteristics. To determine the association between each characteristic and the receipt of PSA testing, we used log-binomial models to estimate unadjusted and multivariate-adjusted risk ratios and 99% con-
Confidence intervals. In addition, to describe the combined effect of age and health status on the use of screening PSA, we categorized men into 12 subgroups on the basis of age (4 categories) and Charlson score (3 categories). Subgroups ranged from men aged 70 to 74 years in best health who have greater than a 90% probability of living 10 years to men aged 85 years and older (74 to 36% for men aged 85 years or older). The percentage of men expected to survive 10 years was greatest at ages 70 years or older (0.90 [0.89-0.91]) and 70-74 years in best health (0.87 [0.86-0.88]). Within each age group, worsening health had even less influence on the use of PSA screening.

In addition, although an increase in Charlson score from 0 to 4 is associated with more than a 4-fold increased risk of death,29 worsening health was associated with only a small decrease in PSA screening rates. PSA rates ranged from 58% for men in best health to 51% for men in worst health (P<.001). Within each age group, worsening health had even less influence on the use of PSA screening.

### RESULTS

#### Participant Characteristics

Baseline characteristics of the 597,642 elderly men in our cohort are presented in Table 1 according to health status. The median age was 77 years (SD=4.7 years). The median Charlson score was 1.8 (SD=2.0) with scores ranging from 0 to 22. Thirty percent of men had a Charlson score of 0 (denoting best health) and 15% of men had a Charlson score of 4 or more (denoting worst health). Among men in worst health, 68% had diabetes and 47% had congestive heart failure. In addition, 47% of men in worst health had been hospitalized in 2002 compared with 6% of men in best health.

#### PSA Screening Rates

Fifty-six percent of elderly men (333,041 of 597,642) received a PSA test in 2003; 68% had their first PSA in 2003 performed in the VA system, whereas 32% were performed within Medicare. Characteristics associated with receipt of PSA screening are listed in Table 2. Age was the strongest predictor of PSA screening. The percentage of men who underwent a PSA test in 2003 decreased with advancing age, ranging from 64% for men aged 70 to 74 to 36% for men aged 85 years or older (P<.001). However, rates of PSA screening in our cohort did not decrease as much as estimated 10-year survival decreases with advancing age, such that the disparity between the percentage of men screened and the percentage of men expected to survive 10 years was greatest at older ages (Figure 2).27

In addition, although an increase in Charlson score from 0 to 4 is associated with more than a 4-fold increased risk of death,29 worsening health was associated with only a small decrease in PSA screening rates. PSA rates ranged from 58% for men in best health to 51% for men in worst health (P<.001). Within each age group, worsening health had even less influence on the use of PSA screening.

### Table 2. Rates of Prostate-Specific Antigen Screening in Men Aged 70 Years or Older According to Patient Characteristics (N = 597,642)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Screening Prostate-Specific Antigen Rate, No. (%)</th>
<th>Risk Ratio (99% Confidence Interval)</th>
<th>Adjusted Risk Ratio (99% Confidence Interval)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70-74</td>
<td>146,176 (64)</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>75-79</td>
<td>118,321 (56)</td>
<td>0.87 (0.86-0.88)</td>
<td>0.90 (0.89-0.91)</td>
</tr>
<tr>
<td>80-84</td>
<td>56,310 (45)</td>
<td>0.71 (0.70-0.72)</td>
<td>0.74 (0.73-0.75)</td>
</tr>
<tr>
<td>85+</td>
<td>12,234 (36)</td>
<td>0.56 (0.55-0.57)</td>
<td>0.60 (0.59-0.62)</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>303,300 (57)</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Black</td>
<td>19,436 (46)</td>
<td>0.81 (0.80-0.82)</td>
<td>0.82 (0.81-0.83)</td>
</tr>
<tr>
<td>White Hispanic</td>
<td>61,414 (57)</td>
<td>1.00 (0.98-1.03)</td>
<td>1.01 (0.99-1.04)</td>
</tr>
<tr>
<td>Other</td>
<td>316,400 (56)</td>
<td>0.81 (0.79-0.84)</td>
<td>0.89 (0.86-0.92)</td>
</tr>
<tr>
<td>Married</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>249,256 (58)</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>No</td>
<td>81,457 (49)</td>
<td>0.85 (0.84-0.86)</td>
<td>0.88 (0.88-0.89)</td>
</tr>
<tr>
<td>Census region</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>143,128 (59)</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Northeast</td>
<td>46,433 (57)</td>
<td>0.96 (0.96-0.97)</td>
<td>0.96 (0.95-0.97)</td>
</tr>
<tr>
<td>Midwest</td>
<td>97,211 (54)</td>
<td>0.92 (0.92-0.93)</td>
<td>0.92 (0.91-0.92)</td>
</tr>
<tr>
<td>West</td>
<td>46,269 (50)</td>
<td>0.85 (0.84-0.86)</td>
<td>0.85 (0.84-0.86)</td>
</tr>
<tr>
<td>Lived in ZIP code tabulation area</td>
<td>in which 25% or more of adults had a college education†</td>
<td>1.00 (0.99-1.00)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>104,092 (57)</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>No</td>
<td>220,321 (55)</td>
<td>0.97 (0.96-0.97)</td>
<td>0.99 (0.99-1.00)</td>
</tr>
<tr>
<td>Median annual income of ZIP code tabulation area‡</td>
<td>Highest tertile (&gt;$27,946)</td>
<td>119,100 (56)</td>
<td>1.00 (0.99-1.01)</td>
</tr>
<tr>
<td>Middle tertile</td>
<td>107,764 (56)</td>
<td>0.90 (0.89-0.91)</td>
<td>0.96 (0.96-0.97)</td>
</tr>
<tr>
<td>Lowest tertile</td>
<td>97,081 (50)</td>
<td>0.82 (0.81-0.83)</td>
<td>0.91 (0.90-0.92)</td>
</tr>
<tr>
<td>Distance to nearest VA clinic, miles§</td>
<td>&lt;10</td>
<td>173,085 (56)</td>
<td>1.00 (1.00-1.00)</td>
</tr>
<tr>
<td>10-49</td>
<td>148,498 (56)</td>
<td>1.00 (0.99-1.01)</td>
<td>0.97 (0.97-0.98)</td>
</tr>
<tr>
<td>50 or more</td>
<td>10,901 (56)</td>
<td>1.00 (0.99-1.02)</td>
<td>1.01 (1.00-1.03)</td>
</tr>
<tr>
<td>Charlson score</td>
<td>0 (Good health)</td>
<td>102,705 (58)</td>
<td>1.00 (1.00-1.00)</td>
</tr>
<tr>
<td>1-3 (Average health)</td>
<td>183,651 (56)</td>
<td>0.97 (0.97-0.98)</td>
<td>0.97 (0.97-0.98)</td>
</tr>
<tr>
<td>4+ (Poor health)</td>
<td>46,685 (51)</td>
<td>0.88 (0.87-0.89)</td>
<td>0.89 (0.88-0.90)</td>
</tr>
<tr>
<td>No. of VA clinic visits in 2003</td>
<td>0</td>
<td>11,008 (34)</td>
<td>1.00 (1.00-1.00)</td>
</tr>
<tr>
<td>1-2</td>
<td>144,965 (57)</td>
<td>1.70 (1.67-1.74)</td>
<td>1.61 (1.58-1.64)</td>
</tr>
<tr>
<td>3-4</td>
<td>88,686 (59)</td>
<td>1.75 (1.72-1.79)</td>
<td>1.67 (1.64-1.71)</td>
</tr>
<tr>
<td>5 or more</td>
<td>88,282 (54)</td>
<td>1.61 (1.58-1.64)</td>
<td>1.57 (1.54-1.61)</td>
</tr>
</tbody>
</table>

Abbreviation: VA, Veterans Affairs.

*Adjusted for all the variables in the table.
†Regions are defined by the US Census Bureau.25
‡Census data were missing for 3% of participants.
§Miles to kilometers conversion (multiply by 1.6): 1 mile (<16 km), 10-49 mi (16-78.4 km), ≥50 mi (≥80 km).

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PSA SCREENING AMONG ELDERLY MEN

COMMENT

PSA screening rates are high among veterans aged 70 years or older, with 56% receiving a PSA test in 2003. In addition, while screening decreases with advancing age, poor health status, as measured by the degree of comorbidity, had minimal influence on screening rates, such that many men with a low probability of living 10 years are undergoing PSA screening. First, even when 10-year survival based on age becomes extremely low, PSA screening rates remain substantial. For example, 36% of veterans aged 85 years or older were screened, whereas less than 10% of men in this age group are expected to survive 10 years. Second, there is strong evidence that few men aged 70 years or older with a Charlson score of 4 or more will survive 10 years. Yet, 51% of these men had a PSA test in 2003, representing more than 46 000 veterans. Third, several nonclinical factors, such as region of the country, had greater impact on PSA screening rates than health, such that screening rates exceeded 60% for some subgroups of men in worst health.

The high PSA rates in our study, particularly among men in poor health, suggest considerably inappropriate screening in elderly veterans, with potentially harmful consequences. While controversy surrounds PSA screening due to lack of data from randomized trials, even PSA advocates do not recommend screening men with limited life expectancies. This is because even if PSA screening is ultimately proven to reduce prostate cancer mortality, lead-time estimates and studies of untreated localized prostate cancer suggest that only men who are likely to live 10 to 20 years could expect to receive such a survival benefit. Therefore, elderly men with a low probability of living 10 years have minimal chance of benefit while being exposed to the immediate and often substantial harms of screening. For example, the specificity of PSA decreases with advancing age, leading to higher rates of false-positive results requiring needle biopsies or cycles of repeat testing and anxiety.

Even if prostate cancer is identified, modeling studies suggest that 2 out of every 3 cancers detected by screening men between ages 70 to 75 years would never have produced symptoms during their lifetime. In addition, if prostate cancer identified by screening is treated, elderly men suffer more complications, including urinary incontinence, erectile dysfunction, bowel dysfunction, hip fractures, and even death.

Our screening rates based on the actual performance of PSA testing are consistent with national surveys that have suggested many men in the United States do not stop PSA screening at older ages or when they develop poor health. For example, in our study 43% of screen-eligible veterans aged 80 years or older had a PSA test performed in 2003 compared with 56% of men in this age group who reported a PSA in the 2001 Behavioral Risk Factor Surveillance System. Therefore, high PSA screening rates are not unique to older men within the VA. Thirty-two percent of PSA tests performed in our cohort of regular VA users were performed outside the VA system in Medicare. We also found similar factors associated with screening as have been found in the general US population. For example, black veterans are less likely to undergo PSA screening, while veterans who are married or live in higher income areas are more likely to undergo screening. Given that similar factors influence PSA screening among veterans and nonveterans, it seems likely that inappropriate screening similarly extends beyond the VA health care system.

tence on PSA screening rates (FIGURE 3). In fact, among men aged 85 years or older, the PSA screening rate for men in best health was 34% vs 36% for men in worst health (P < .001).

In multivariate analyses, the effect of health status on PSA screening remained small even after adjustment for all factors in Table 2. In addition, nonclinical factors, such as marital status and region of the country, continued
There are several possible explanations for our findings of high PSA screening rates among older men with limited life expectancies. First, PSA has been widely promoted in the media as a simple blood test that is beneficial regardless of life expectancy, such that many older men may be requesting screening. However, in our review of 100 random charts, only 4% of PSA tests were documented as being requested by patients.

Second, clinicians may be screening older men in poor health because they feel it is difficult to predict an individual’s life expectancy. While the Charlson Comorbidity Index is a strong predictor of mortality in populations, its accuracy in predicting an individual’s mortality is not known. However, even among men aged 85 years or older in worst health, few clinicians would expect to live 10 years, screening rates were still 36%. This suggests some clinicians may be uncomfortable incorporating prognosis into screening decisions. This discomfort may in part be driven by the fact that a small number of elderly men in poor health will live more than 10 years or by the fear of malpractice liability. However, screening elderly men who are in poor health is not considered a standard of care.

A third possible explanation for the high screening rates found in this study is that older men in poor health visit clinicians more often and may be more willing to accept PSA screening.

Fourth, quality indicators, which are used extensively by the VA, frequently promote cancer screening regardless of health and this enthusiasm may have spread to PSA screening. However, VA guidelines do not recommend screening for prostate cancer. Rather, national VA quality indicators encourage education about prostate cancer screening for men aged 50 to 69 years.

And fifth, under favorable assumptions about screening efficacy, some may view PSA as underused in healthy elderly men and interpretations may differ as to the degree of overuse in elderly men in poor health.

Our study has several limitations. First, laboratory and claims data do not give reasons why a test was ordered and some PSA tests in our cohort may have been performed for nonscreening purposes. However, our chart reviews suggest our exclusion criteria were effective in selecting a cohort in whom PSA tests were primarily sent for screening. Second, while our data sources completely capture PSA testing performed at 104 VA facilities, some tests performed outside the VA may have been missed. For example, Medicare claims do not capture PSA tests paid for by other sources, which would underestimate screening usage. Third, while the Charlson Comorbidity Index is strongly predictive of mortality, it does not include all factors that may determine life expectancy, such as physical functioning or laboratory values. Better tools are needed to predict life expectancy. Fourth, our cohort consists of men who receive care in the VA system, and the generalizability of our findings to men who do not use the VA is uncertain. However, understanding PSA screening practices within the VA is important in its own right given the VA is the largest health care system for men in the US and a leader in improving health care quality.

CONCLUSION
In conclusion, PSA screening rates among elderly veterans with limited life expectancies should be much lower than current practice. Guidelines should be more explicit about how life expectancy is defined and provide tools to help clinicians identify men who have poor prognoses, considering both advancing age and the presence of severe comorbidities. These men should be told that PSA screening is more likely to harm them than to help them. Prior studies have shown that educating men about PSA screening reduced patient interest in screening and led to fewer PSA tests. This in turn would allow efforts to be directed toward prevention strategies in elderly men that have more immediate benefits and better evidence of effectiveness.

Author Contributions: Dr Walter had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Study concept and design: Walter, Bertenthal, Konyet. Acquisition of data: Bertenthal. Analysis and interpretation of data: Walter, Bertenthal, Lindquist, Konyet. Drafting of the manuscript: Walter, Konyet. Critical revision of the manuscript for important intellectual content: Walter, Bertenthal, Lindquist, Konyet. Statistical analysis: Walter, Bertenthal, Lindquist. Obtained funding: Walter. Administrative, technical, or material support: Bertenthal.

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Disclaimer: The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs.

REFERENCES
Author in the Room Teleconference

Join Dr Walter, an author of this article, on Wednesday, December 20, 2006, from 2 to 3 PM eastern time for “Author in the Room,” an interactive teleconference aimed at closing the gap between knowledge—what is published in this article—and action—how much of this knowledge can be put into your actual practice. This teleconference, facilitated by clinical experts, should help readers answer their questions and consider the implications of the article for their practice.

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