Is prostate-specific antigen (PSA) screening indicated for any subgroup of men?

EVIDENCE-BASED ANSWER

Although African American men, men with a first-degree relative with prostate cancer (CaP), and older men constitute higher-risk subgroups, no well-designed randomized controlled trials are available that show PSA testing to improve mortality or quality of life for these or any other groups of men.[1] A trend toward detecting more localized cancers and a possible decreasing mortality rate from CaP in all men may be related to PSA testing, lead-time bias, or both. (Grade of recommendation: C, based on inadequate reference standards and an unclear clinical decision rule.)

EVIDENCE SUMMARY

The value of screening with PSA in any population is uncertain. This issue will remain controversial at least until the first of 2 well-designed randomized controlled trials reports results in 2004.[2,3] However, higher-risk subgroups merit special attention. Screening the 3 groups mentioned above would improve the positive predictive value of PSA, but crucial data to determine whether this will improve outcomes are lacking. Using average estimates, if 3300 African American men (aged 50 to 65 years) were screened, 100 would have cancer. After subsequent radical prostatectomy, 1 screened man would die from the procedure, 60 would become impotent, and 20 would be incontinent.[4]

If current therapies for localized therapy do not decrease morbidity or mortality, screening higher-risk groups merely puts them at increased risk for potentially harmful interventions. Biopsies cannot reliably predict which cancers will progress and which will lie indolent. The 30% incidence of CaP on autopsy means that more people die *with* CaP than *from* it. Using estimates of the prevalence and natural history of the disease, decision analyses report varying years saved by screening compared with watchful waiting (ranging from a gain of 2.5 quality-adjusted life years (QALYs) to an actual decrease in QALYs, depending primarily on the rate of progression to metastatic disease and efficacy of treatment.[5,6] Another decision analysis, using quality-of-life measures, concluded that men would favor screening only if the prevalence of CaP were greater than any current estimate.[7] Since the mean expected survival at age 70 is slightly more than 10 years, PSA screening for men 70 years or older to detect cancers with a 10-year survival rate of approximately 90% makes little sense.

RECOMMENDATIONS FROM OTHERS

The US Preventive Services Task Force in 1996 recommended against performing routine screening, stating that there was fair evidence to exclude the test. The American Cancer Society (ACS) and the American Urological Association (AUA) recommend that PSA be offered annually, beginning at patient age 50, to men with a life expectancy of more than 10 years. The same recommendation extends to younger African American men (age 40 years [AUA] or 45 years [ACS]) and men with 1 (AUA) or 2 (ACS) affected first-degree relatives. The American College of Physicians and the American Academy of Family Physicians (AAFP) recommend a discussion of the benefits and harms of screening, diagnosis and treatment, and individualizing the decision to screen.

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CLINICAL COMMENTARY

When ordering a PSA test, note the last time the patient ejaculated. Ejaculation within 48 hours may elevate PSA levels, as may prostatitis, urinary retention, and prostatic massage, although a digital examination does not. Finasteride and herbal remedies such as saw palmetto can lower PSA levels.

In practice, it is helpful to follow the guidelines from the AAFP, which advises counseling the patient about the known risks and uncertain benefits of the test (http://www.familydoctor.org/healthfacts/361/).

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