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Still No Recommendations for Universal Prostate Cancer Screening

Two large clinical trials designed to shed light on the advisability of population-based screening for prostate cancer with the Prostate Specific Antigen (PSA) blood test published interim reports in March. Both were randomized clinical trials in which half the participants were assigned to have regular PSA testing while the other half were assigned to usual care. The European multi-national study reported reduced mortality from prostate cancer among men having PSA tests, compared to those not tested, but also reported that for each cancer death prevented, 48 men would have to be treated, some of them unnecessarily.¹ The US study found that prostate cancer mortality did not differ between the two groups, and men in the screening group experienced serious complications from follow-up procedures to evaluate a positive screening test and complications from treatment of prostate cancer, resulting in greater net risk than benefit from screening.²

The main concerns about population-based or universal PSA screening were not addressed by these studies and remain unresolved:

- PSA tests have high false positive rates. PSA can be elevated by conditions other than prostate cancer, especially benign prostatic hyperplasia (BPH). BPH is a non-cancerous progressive enlargement of the prostate. It is not uncommon in men over age 50. Although BPH can cause annoying urinary symptoms, it is not life-threatening. There are now drugs available that can relieve symptoms for many men.
- PSA tests cannot distinguish between what are called indolent prostate cancers, slow-growing and never going to cause harm, and rapidly-growing and aggressive prostate cancers that are life-threatening.
- Even the diagnostic procedures that follow a positive PSA test are often unable to distinguish between these two extremes of prostate cancer. Men who end up with a diagnosis of prostate cancer must therefore make a decision about treatment without knowing if it is really necessary. They therefore face the risk of serious complications of treatment such as urinary incontinence and impotence with no certainty that treatment is necessary.

¹ Schroeder FH et al., 2009. Screening and prostate-cancer mortality in a randomized European study. *NEJM* 360:1320-1328.

² Andriole GL et al. 2009. Mortality results from a randomized prostate-cancer screening trial. *NEJM* 360:1310-1319.

Montana Cancer Control Section

Essential research about prostate cancer remains to be done before population-based screening can be recommended.³ Investigators must find ways to distinguish indolent from life-threatening forms of prostate cancer, either through a more sensitive and specific screening test or through safe and effective diagnostic procedures following a positive screening test.

The guidelines about prostate cancer screening³ have not been changed by the recently published interim reports:

- The evidence of benefit relative to risk is inadequate to recommend population-based or universal screening for prostate cancer.
- Men younger than age 75 should make the decision about screening in consultation with their health care providers, taking into account their personal risk factors and family histories, and being fully informed about the risks as well as the potential benefits.
- For men older than age 75, and for men with a life expectancy of less than 10 years, the potential risks of prostate cancer screening outweigh the potential benefits.

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³ United States Preventive Services Task Force, <http://www.ahrq.gov/clinic/uspstf08/prostate/prostatesum.htm>