Topic Brief: Prostate Cancer Screening Harms

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Purpose: This document summarizes the information addressing a topic nomination submitted on October 3, 2023, through the Effective Health Care Website. This information was used to inform the Evidence-based Practice Center (EPC) Program decisions about whether to produce an evidence report on the topic, and if so, what type of evidence report would be most suitable.

Issue: The nominator is interested in seeing practice changes in the U.S. healthcare system in how prostate cancer is detected. The nominator is concerned that diagnostic biopsies for prostate cancer may be more harmful than other methods of detection and is hopeful that an evidence report on this topic might influence changes in positive coverage policies for these alternative approaches.

Findings: The EPC program will not develop a new evidence product for this topic because practice and policy decisions fall outside of the program's scope. Additionally, the United States Preventive Services Task Force's (USPSTF) evidence-based prostate cancer screening recommendations are currently being updated, and a recent 2023 guideline from the American Urological Association (AUA) and the Society of Urologic Oncology (SUO) addresses early detection and repeat biopsy.

Background

Prostate cancer is the second leading cause of death for men in the United States.[1] One in eight American men will be diagnosed with the disease in their lifetimes, and one in 41 men will die of prostate cancer. Prostate cancer is rare in men under the age of 40 and is more likely to develop in older men and in non-Hispanic Black men. About 60% of cases are diagnosed in men who are 65 or older.[1]

Prostate cancer screening in the United States is not routinely performed in asymptomatic men because the harms outweigh the benefits in the literature. The USPSTF's 2018 recommendation summary concluded that "PSA (prostate-specific antigen) screening may reduce prostate cancer mortality risk, but is associated with false-positive results, biopsy complications, and overdiagnosis" and, for men aged 55 to 69, recommended the decision to undergo prostate cancer screening should be up to the individual, and each man should discuss the potential benefits and harms of screening with his doctor.[2] Harms of prostate biopsy may include false positives and adverse events of treatment (sexual dysfunction, urinary incontinence, other) and risks of biopsy (anxiety, blood in the urine or sperm, pain, infection and rarely hospital admission). Additionally, the USPSTF recommended against PSA-based screening for prostate cancer in men ages 70 and older.[3]

As a result of these recommendations, in clinical practice, if a patient aged 55 to 69 has discussed prostate cancer screening with their doctor and ultimately decided to proceed, the patient will begin by undergoing initial testing such as PSA blood testing and/or digital rectal exam. If results from these tests suggest that the patient may have prostate cancer, a urologist may recommend prostate biopsy, where multiple tissue samples are removed from the prostate and inspected for cancer cells.[4] Prostate biopsy is considered the current standard of care following a significantly elevated PSA test.[5]

If a biopsy is positive, there are multiple approaches to follow-up that depend on the cancer's grade and stage. Patients who discover they have small, slow growing prostate cancer that is confined to one area of the prostate and asymptomatic may opt for active surveillance, sometimes called "expectant management."[6] Active surveillance may involve a variety of approaches (digital rectal exams, PSA testing, biopsy, magnetic resonance imaging, etc.), and guidelines do not offer a consensus on the optimal strategy of surveillance intensity.[4, 6] However, all guidelines currently recommend serial monitoring with PSA testing, repeat biopsies, or repeat imaging studies.[7, 8]

Assessment Methods

We assessed nomination for priority for a systematic review or other AHRQ EHC report with a hierarchical process using established selection criteria. Assessment of each criteria determined the need to evaluate the next one.

1. Determine the *appropriateness* of the nominated topic for inclusion in the EHC program.
2. Establish the overall *importance* of a potential topic as representing a health or healthcare issue in the United States.
3. Determine the *desirability of new evidence review* by examining whether a new systematic review or other AHRQ product would be duplicative.
4. Assess the *potential impact* a new systematic review or other AHRQ product.
5. Assess whether the *current state of the evidence* allows for a systematic review or other AHRQ product (feasibility).
6. Determine the *potential value* of a new systematic review or other AHRQ product.

Related Resources

We identified additional information during our assessment that might be useful.

- The USPSTF's 2018 prostate cancer screening recommendations are currently undergoing an update. You can learn more at: Recommendation: Prostate Cancer: Screening | United States Preventive Services Taskforce (uspreventiveservicestaskforce.org)
- The AUO/SUO 2023 guideline about early detection of prostate cancer involves discussion of active surveillance and repeat biopsy best practices: Early Detection of Prostate Cancer: AUA/SUO Guideline (2023) - American Urological Association (auanet.org)
- The Centers for Disease Control and Prevention (CDC) provides some information and resources for those wondering whether prostate cancer screening is right for them: Should I Get Screened for Prostate Cancer? | CDC

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