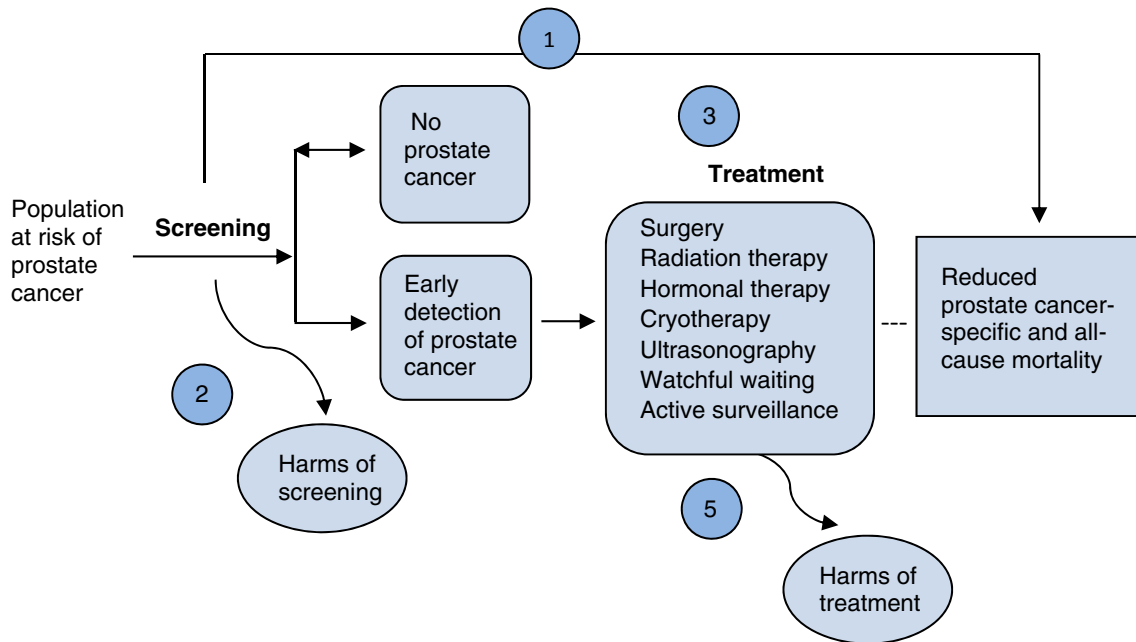


## Appendix 1: Analytic framework and key questions



### Key Questions

1. What is the direct evidence that screening for prostate cancer with prostate-specific antigen (PSA), as a single-threshold test or as a function of multiple tests over time, decreases prostate cancer-specific and all-cause mortality?
  - 1b. Is there evidence to support differential screening based on individual risk factors for prostate cancer such as age, African descent, family history of prostate cancer or previously assessed increased PSA values – either absolute values or increased PSA measures over time?
2. What are the harms of PSA-based screening for prostate cancer?
3. What are the benefits of treatment of early-stage or screen-detected prostate cancer?
4. Is there evidence that tailoring the method of following up abnormal screening results to patient characteristics (example: active surveillance vs treatment A vs B) lead to clinically important differences in the harms and benefits of screening with PSA?
5. What are the harms of treatment of early-stage or screen-detected prostate cancer?

## Contextual Questions

Contextual questions will be addressed in two stages, depending on whether evidence of PSA test screening performance of screening is identified.

Stage one:

Questions that are necessary to assist in making a decision about the direction of the recommendation:

1. What are the patient values and preferences for PSA screening for prostate cancer?

Stage two:

If evidence of effectiveness is sufficient for the Task Force to recommend screening, the following additional questions will be added:

2. What process and outcome performance measures or indicators have been identified in the literature to measure and monitor the impact of PSA screening for prostate cancer?
3. What is the optimal screening interval for PSA screening for prostate cancer and should this interval vary based on risk level (e.g., age, prior PSA levels, or other measures such as Gleason score)?
4. What are the most effective (accurate and reliable) risk assessment tools to identify:  
a) risk of prostate cancer and b) risk of poor outcomes after PSA testing and biopsy?
5. What is the cost-effectiveness of PSA screening asymptomatic adults for prostate cancer? Costs to the system and to patients will be included if found.