Prostate Cancer Screening

NATIONAL GUIDELINE SUMMARY

The guideline was developed using an evidence-based methodology. This guideline summary is intended to guide health care professionals with prostate cancer screening in asymptomatic adult men. It does not apply to men who have signs or symptoms of prostate disease, or in whom a diagnosis has already been made.

PROSTATE CANCER SCREENING AND SHARED DECISION-MAKING

• For average risk men, offer prostate cancer screening with prostate-specific antigen (PSA) testing and digital rectal examination (DRE) in the context of a shared decision-making approach starting at age 50.

• For higher risk men (i.e., black/African-American descent, family history of at least one first degree relative with prostate cancer), offer prostate cancer screening with PSA and DRE in the context of a shared decision-making approach starting at age 40.

• Prostate cancer screening is not recommended for men age 75 or older.

• In the shared decision-making approach, include information regarding the potential benefits and risks of undergoing screening for prostate cancer. This discussion may include the following points:

Overall, it is uncertain whether prostate cancer screening is beneficial. Some studies have shown a survival benefit for prostate cancer screening, while others have not. Many of these studies have serious methodological flaws. Whether a man is at average or higher risk, the same uncertainties regarding the effects of screening apply.

Population statistics indicate that prostate cancer mortality in the United States has decreased between 1990 and 2007. It is not known whether this mortality improvement is due to increased screening, improved treatment, or both.

For men who have an elevated PSA or abnormal DRE, a prostate biopsy may be recommended. Prostate biopsies have potential complications but most men undergo the procedure without difficulty.

Men with an elevated PSA have approximately a 30% chance of having a prostate biopsy that is positive for cancer (i.e., fair positive predictive value). Men with an elevated PSA have approximately a 70% chance of having a prostate biopsy that is negative for cancer.

If a cancer is detected, it may or may not ever become clinically significant in a man’s lifetime.

If diagnosed, the grade and stage of the cancer determines the likely effectiveness of treatment. Potential benefits of prostate cancer treatments may include increased life span, and reduction in morbidity from locally advanced and metastatic disease. Prostate cancer treatments may also have potential complications. Some men with prostate cancer may elect not to be treated after discussion with their urologist.

IF SCREENING IS REQUESTED

• For men who elect to participate in prostate cancer screening:

1. Routine prostate cancer screening should not be performed more than once per year.

2. When the initial and subsequent PSA values are ≤ 2.0, a screening interval of every two years is recommended.

3. When PSA values exceed the age-specific thresholds in Table 1,* consider repeating the PSA test within one month. If the repeat PSA value still exceeds the age-specific thresholds, referral to Urology is recommended.

(*Note: Normal variation of PSA values of ~20% have been demonstrated in some studies.)

Table 1: Age-Specific PSA Thresholds for Referral to Urology

<table>
<thead>
<tr>
<th>AGE</th>
<th>THRESHOLD</th>
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<tbody>
<tr>
<td>49 or younger</td>
<td>&gt; 2.5 ng/mL</td>
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<tr>
<td>50 to 59</td>
<td>&gt; 3.5 ng/mL</td>
</tr>
<tr>
<td>60 to 69</td>
<td>&gt; 4.5 ng/mL</td>
</tr>
<tr>
<td>70 or older</td>
<td>&gt; 6.5 ng/mL</td>
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</tbody>
</table>

1 Positive predictive value (PPV) estimates are based on median value from results of 24 observational studies. See KP National Prostate Cancer Guideline, Recommendation 3, for more details regarding PSA test characteristics and accuracy.

2 Between 1990 and 2007, SEER data show a 38% decrease across all ages from 39 to 24 deaths per 100,000. For men < 65, the drop was 41%, from 3.02 to 1.77 deaths per 100,000. For men > 65, the drop was 39%, from 284 to 174 per 100,000. (US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Standard Population. (19 age groups - Census P25-1130))

3 Functionally, a clinically ‘insignificant’ (or ‘indolent’) prostate cancer is taken to mean one that has a low probability for clinical progression. While definitions of clinically insignificant versus clinically significant prostate cancer have not been prospectively validated, much indirect evidence suggests that low volume, well differentiated prostate cancers have a low progression risk. The consensus criteria among the various published definitions include a Gleason score of six or less, PSA less than 10 (or a PSA density less than 0.15 ng/ml), and less 50% of biopsy cores involved. Other criteria that add stringency include clinical stage T1c (no palpable abnormalities), stable PSA kinetics, and less than three positive biopsy cores. These definitions are often used to clinically select appropriate patients for watchful waiting or active surveillance.