Free Prostate Specific Antigen (PSA)

SYNOPSIS AND RELEVANCE

To prevent diagnostic error and inappropriate use of serum free PSA, this test should only be ordered and performed when total PSA is measured first and determined to be within a specific range (often set at between 4.0 ng/mL to 10.0 ng/mL). Under these conditions the free PSA percentage can be accurately interpreted. Otherwise, free PSA results may not be reliable for risk stratification of prostate cancer.

INSIGHTS

Serum free PSA has value for prostate cancer risk stratification only when total serum PSA is within a defined range, usually set at between 4.0 ng/mL to 10 ng/mL.

Serum free PSA should not be used when the total PSA is outside the interpretable range specified by testing laboratory.

BACKGROUND

Testing of free prostate-specific antigen (PSA) can be more useful than total PSA for discriminating prostate cancer from prostatic hyperplasia when used in men with borderline or moderate elevation of total PSA. This test can be especially helpful for informing decisions about initial or repeat prostate biopsies when total PSA is elevated but within a range in which risk of cancer is relatively low. However, interpretation of free PSA test is reliable only when total serum PSA is within a defined range, typically between 4.0 to 10.0 ng/mL, although this range may vary slightly between laboratories. Use of free PSA when total PSA range is outside the interpretable range is subject to diagnostic error and cannot be relied on to discriminate risk for prostate cancer. For this reason, it is good practice for the laboratory to only test free PSA when the patient's total PSA is first established to be within an acceptable range for accurate interpretation of results.

REFERENCES

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