BERKELEY, CA (UroToday.com) - Hypogonadal men often seek testosterone replacement therapy.

To eliminate the chance that they harbor prostate cancer (CaP), it is considered prudent to check the PSA level and biopsy them if elevated. However, in the December 2006 issue of Urology, Drs. Morgentaler and Rhoden report that CaP is present in more than 1 of 7 hypogonadal men with a PSA of 4.0ng/ml or less. Their study cohort consisted of 345 men diagnosed with hypogonadism prior to initiating testosterone replacement therapy. All men had low levels of total testosterone (TT) or free testosterone (FT), or both and a PSA level less than 4.0ng/ml. TT levels less than 300ng/dL and FT levels 1.5ng/dLwere considered subnormal, and TT levels of less than 250ng/dL and FT levels less than 1.0ng/dL were considered as more severe levels of hypogonadism. All men underwent prostate biopsy.

Mean patient age was 59 years, and of these 184 (53%) had a TT level of less than 300ng/dL and 327 (95%) had a FT level of less than 1.5ng/dL. Digital rectal examination findings were normal in 70% of patients. CaP was found in 52 men (15%) and 293 were without CaP. Men with CaP were slightly older than men without CaP. Men with abnormal DRE findings had greater prevalence of CaP compared to those with a normal DRE. DRE findings had a sensitivity of 38.5% and specificity of 72%. Prostatic intraepithelial neoplasia without CaP was found in 53 men, and 41 underwent repeat biopsy. CaP was identified in 4 of these 41 men. CaP prevalence increased from 13% in men age 40-49 years to 28% in men age 70 years or older.

Men with CaP had a greater PSA level than those without, and the CaP detection rate was 36% for men with a PSA level of 3.1-4.0ng/ml. No significant difference was noted in Gleason scores for varying TT or FT levels. Higher testosterone levels (>250ng/dL correlated with greater rate of CaP than levels less than 250ng/ml. A FT level of 1.0ng/dL or less had a greater rate of CaP than an FT level >1.0ng/dL. The cancer rate was 21% for men with an FT level, less than the median of 1.1ng/dL. This study supports that a sizable proportion of hypogonadal men with a normal PSA level have CaP. It suggests that all hypogonadal men should be considered for a prostate biopsy prior to testosterone replacement therapy.
Morgentaler A, Rhoden EL
Urology: 68(6):1263-1267, 2006