Prevention of hormone-related cancers: prostate cancer.

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Abstract

Androgens are known to play an important role in normal prostate development, benign prostatic hyperplasia, established prostate cancer, and in prostate carcinogenesis. However, despite convincing experimental and clinical evidence, the epidemiologic data correlating sex steroid levels with disease risk is inconsistent. More recent work has focused on studies of polymorphisms in germ-line DNA in an effort to develop polygenic models of prostate cancer susceptibility and prognosis. Such models have the potential to aid in the selection of men for specific chemopreventive interventions and to help determine which men with localized prostate cancer are most likely to benefit from aggressive therapy. In this review, we will provide a brief summary of androgen metabolic pathways followed by an assessment of the epidemiology literature addressing the relationship between androgens and prostate cancer. Finally, we will address the two major questions that have arisen in response to the recently published results from the Prostate Cancer Prevention Trial: Who are the best candidates for finasteride chemoprevention, and what are the clinical implications of the high prevalence of prostate cancer that was detected in men with prostate-specific antigen levels in the so-called "normal" range?

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