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A NOVEL POLYMORPHIC ALU_YB₈ INSERTION IN 8Q₂₄ IS ASSOCIATED WITH PROSTATE CANCER IN AFRICAN AMERICANS

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A Novel Polymorphic AluYb8 Insertion in 8q24 is Associated with Prostate Cancer in African Americans.

Synopsis:

Our research study is primarily focused on how a polymorphic alu repeat on chromosome 8q24 is associated with prostate cancer risk in African Americans. We used molecular biology techniques to study this topic.

Abstract

Globally, African American men have the highest incidence of prostate cancer and are more than twice as likely to die of the disease as Caucasian males. The causes of higher prostate cancer rates among black men remain largely unknown. Genetic factors may, in part, contribute to higher prostate cancer incidence and mortality among African Americans. We recently identified an AluYb8 insertion/deletion polymorphism on chromosome 8q24 that may be associated with increased risk for prostate cancer in African American men. To test this hypothesis, we genotyped the polymorphism in 121 African American men with prostate cancer and 390 African American healthy male controls and evaluated its association with prostate cancer. African American men with at least 1 copy of the AluYb8 insertion had an increased risk of prostate cancer (odds ratio, 1.6; 95% confidence interval, 1.0-2.5) compared with those without the polymorphism. Our results suggest that the AluYb8 insertion/deletion polymorphism is significantly associated with increased prostate cancer risk in African Americans.