

A salivary hormonal study on individuals of African ancestry living in different socio-economic environments, in order to understand etiology of prostate cancer

Prostate cancer ranks high among some of the most serious public health problems that significantly impact the lives of men globally. Established risk factors for this disease include age, family history, and African ancestry. While the incidence and mortality of prostate cancer have decreased in the US in recent decades, men of African descent are disproportionately affected. To better understand the etiology of prostate cancer among men of African ancestry, this study examined hormonal differences among men of African descent living in different socio-economic environments by using their saliva samples to study their hormone levels. Using ELISA kits specific to either testosterone or cortisol, hormone levels were determined for each individual's saliva using standards and low and high-quality control samples for validation. The saliva samples collected from individuals living in African countries (n=21) had a mean testosterone concentration of 93.43 pg/mL and standard deviation of 35.924 pg/mL while the mean cortisol concentration was 0.120 mg/dL and the standard deviation was 0.078 mg/dL. The saliva samples collected from individuals with African ancestry in the United States (n=84) had a mean testosterone concentration of 94.680 pg/mL with a standard deviation of 35.218 pg/mL while the mean cortisol concentration was found to be 0.136 mg/dL with a standard deviation of 0.101 mg/dL. This poster will explain data collected for both hormones for males living in African countries and the United States and will discuss whether these hormone levels can be used to determine individuals at risk for prostate cancer. Any observed effects from socio-economic differences will also be discussed.