DNA genotek

Case study

DNA collected with Oragene®•DNA chosen for study to identify genetic variants associated with aggressive prostate cancer

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"We chose Oragene•DNA because the saliva collection kit is very easy to handle and it offers a non-invasive method to collect DNA. The room temperature storage is ideal for us as we had multiple clinics for DNA collection in various locations throughout China. Transporting and storing the DNA saliva samples was easy."

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Study overview

The Center for Cancer Genomics at Wake Forest University Health Sciences uses genomics to gain an understanding of the complex processes involved in the development and progression of various types of cancer, and to develop approaches to utilize this information for the prediction of cancer and personalized intervention. Dr. Xu is a Professor and the Director of the Center for Cancer Genomics at Wake Forest University. Dr. Xu is a well known genetic epidemiologist who specializes in genetic studies focused on prostate cancer. He has published about 200 papers on the genetics of cancer and other complex diseases in leading journals, including NEJM, Nature Genetics, and JNCI.

Dr. Xu is currently involved in a research study to identify genetic variants that are associated with aggressive prostate cancer and the progression of prostate cancer in men of Chinese descent and European descent. Most aging men will develop lesions that would be diagnosed as prostate cancer. While most of these cancers are indolent and remain localized; a subset of prostate cancer is aggressive[1]. Identification of factors associated with risk for aggressive prostate cancer could help reduce over diagnosis and over treatment of this common disease. The study of men with Chinese descent may provide an opportunity to significantly narrow the region harboring causal variants by comparing with men of European descent.

The study participants (men of Chinese descent who have been diagnosed with prostate cancer) are recruited through the Shanghai Center for Disease Control, Changhai Hospital, and Fudan-VARI Center for Genetic Epidemiology in Shanghai, China.

1 Jianfeng, Xu, Siqun Lilly Zheng, et al., *PNAS*, Inherited genetic variant predisposes to aggressive but not indolent prostate cancer.

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Main challenges

The main challenge for this study was the geographic distribution of the collection clinics. Oragene®•DNA's ability to store DNA in saliva at ambient temperature facilitated collections at multiple locations. In addition, because the samples were being collected from patients diagnosed with prostate cancer, it was important to Dr. Xu that the collection be as non-invasive as possible while yielding high quality DNA.

Collection methods considered

Oragene•DNA was the primary method considered for this prostate cancer study. Blood is often the other method considered for cancer studies.

Why Oragene•DNA

Dr. Xu and his team of researchers believed that offering a non-invasive, saliva-based collection device would be the best option for the cohort of patients participating in this study. Oragene•DNA provides a completely non-invasive and easy-to-use option for collecting DNA while meeting the requirements for both high quality and high quantity DNA. Oragene•DNA can be stored at ambient temperature for years, offering the study team the flexibility they needed with regard to storage and extraction.

Results

To date, Dr. Xu has successfully collected over 500 samples from men of Chinese descent for this study. He is optimistic that this genetic research study will yield information that can contribute to more effective detection and treatment of aggressive prostate cancer.

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