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ASIA EDITION

Australia identifies genetic risk factors for prostate cancer

14 October 2020 | News

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Monash University's Precision Medicine research group has discovered multiple new genetic risk factors that make men susceptible to aggressive prostate cancer that will contribute to future prevention of the disease.

Reported in a series of articles published in the prestigious international journals, the combined research outcomes of these studies validate that genetic alterations in the BRCA2, PALB2 and ATM genes are associated with prostate cancer risk in men that have a strong family history and elevates their risk of an aggressive form of the disease.

The studies, involving decades of collaborative research conducted by the Precision Medicine group and the Cancer Epidemiology Division of Cancer Council Victoria, have used the latest genetic sequencing technologies to screen thousands of men with and without prostate cancer.

Led by Dr Tu Nguyen-Dumont, from the Monash School of Clinical Sciences based at Monash Health in Australia, the research group used gene panel sequencing to compare the genetic variants of 787 Australian men with aggressive prostate cancer and 769 men with non-aggressive prostate cancer.

The team also contributed resources to a complementary international study of genetic risk factors for prostate cancer that analysed the DNA repair genes from 5,545 men with aggressive and non-aggressive prostate cancer, with further research comparing gene variations in 920 men with either a strong family history of prostate cancer or the aggressive form of the disease.

"Our findings contribute important evidence to support the clinical interpretation of genetic variation and the identification of the men at greatest risk of developing the disease," Dr Nguyen-Dumont observed.