PRESS RELEASE

Malaysian Study Reveals The Landscape Of Genetic Predisposition To Breast Cancer In Malaysian Moderate To High-Risk Breast Cancer Patients

KUALA LUMPUR, [6 APRIL 2016] – A Malaysian Study, published in the international journal of genetics, molecular and personalized medicine, Clinical Genetics shows that 1 in 5 of breast cancer patients with at least one family member affected by cancer were identified to carry mutations in at least one of the breast cancer predisposition genes, calling for greater awareness for genetic testing among breast cancer patients.

Breast cancer is the leading cancer in women with increasing incidence in both developed and less developed countries. In Malaysia, it affects 1 in 20 women as compared to 1 in 8 Caucasian women. Although the incidence of breast cancer is lower in Malaysia, women present at younger age and at later stages, and survival is poorer as compared to Western countries.

The pilot study describes the first prevalence study using a multigene panel conducted among Malaysian breast cancer patients. Advances in sequencing technology has enabled simultaneous testing of large number of genes as compared to the conventional method of testing single gene at a time. To determine the potential utility of panel testing, the Malaysian scientists investigated the prevalence of germline alterations in 15 known breast cancer genes in a cross-sectional hospital based cohort of 108 moderate to high risk breast cancer patients using targeted next generation sequencing. This technology is a powerful tool and has provided a new revolution for genetic analysis which enable sequencing at single nucleotide resolution of the entire human genome. Twenty-one patients (19%) were identified to carry at least one deleterious mutation. Of these, fourteen patients (13%) had a mutation in the *BRCA1* or *BRCA2* genes, whilst six patients (6%) carried deleterious mutation(s) in 5 other known breast cancer predisposition genes and one patient had a mutation in both *BRCA2* and *BARD1*.

“Our study shows that *BRCA1* and *BRCA2* account for the majority of genetic predisposition to breast cancer in our cohort of Malaysian women. Mutations in other known breast cancer genes are also found but at a lower frequencies. These findings have contributed to a better understanding of genetic cancer risk of patients having alterations in not only the *BRCA*1/2 genes but also other genes associated with breast cancer,” said Professor Dr Teo Soo Hwang, the lead in the study.

"Ultimately the long term goal is to develop effective management guidelines and improve outcomes for at-risk individuals," said Professor Dr Nur Aishah Mohd Taib, the Head of Breast Surgery at University Malaya.

This study is a collaborative effort by Cancer Research Malaysia and University Malaya, with funding from Ministry of Higher Education, Yayasan Sime Darby and PETRONAS.

ENDS

Notes to editor

Identification of germline alterations in breast cancer predisposition genes among Malaysian breast cancer patients using panel testing.

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About Cancer Research Malaysia

Cancer Research Malaysia (formerly known as Cancer Research Initiatives Foundation) is the first independent cancer research organisation in Malaysia. Cancer Research Malaysia conducts research to identify better ways to prevent, detect and cure cancer for Malaysians. Cancer Research Malaysia is committed to ensuring that at least 90% of funds received are spent on research. Cancer Research Malaysia researchers work closely with experts worldwide to fight cancers that occur in Asia as well as globally.

About University Malaya

University Malaya High Impact Research is funded under a special grant by the Ministry of Higher Education Malaysia. Its aim is to conduct research that will lead to publications in top international journals which will help UM get into the top 100 QS World Ranked Universities by 2015. The Breast Cancer Research Programme is headed by Prof. Dr Nur Aishah Mohd Taib and is part of the University Malaya Cancer Research Institute.

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