

PRESS RELEASE

For immediate publication

MALAYSIA LAUNCHES FIRST PRECISION MEDICINE CLINICAL TRIAL FOR MORE EFFECTIVE BREAST CANCER TREATMENT FOR ASIANS

AUROR to test effectiveness of checkpoint immunotherapy for breast cancer patients with genetic variant APOBEC3B

KUALA LUMPUR, 3 December 2020 – Cancer Research Malaysia and Clinical Investigation Centre (CIC) of University Malaya Medical Centre (UMMC) have launched a clinical trial called AUROR, in a study with National University Hospital Singapore, to test if checkpoint immunotherapy is effective for treating breast cancer in Asian patients.

Cancer cells produce invisibility cloaks to hide from our immune system’s “checkpoints”, allowing them to grow and spread. Checkpoint immunotherapy activates the immune system to recognise cancer cells as cells that should be killed, and has already resulted in long-term remission for melanoma, lung, and other cancers, but its effect in breast cancer is still understudied.

“Checkpoint immunotherapy has so far shown to be promising to treat an aggressive form of breast cancer, called triple negative breast cancer, but it is clear that not all patients benefit from this type of treatment. Through research at Cancer Research Malaysia, we now know that more than half of Asian women inherit a genetic variant (called APOBEC3B), and in these women, breast cancers tend to have a lot of damaged DNA, which suggests that their tumours are more likely to respond to checkpoint immunotherapy. Importantly, this genetic variant is four times more common in Asians compared to Caucasians. We are now launching this unique clinical trial to test whether checkpoint immunotherapy can indeed improve the treatment response for breast cancer patients with this genetic variant, and this could lead to a new treatment regimen for Asian breast cancer patients,” explained Professor Datin Paduka Dr Teo Soo Hwang, OBE, Chief Scientific Officer at Cancer Research Malaysia, who led the genomics study.

The success of this clinical trial could result in a better standard of care for Asian breast cancer patients and bring us a step closer to personalised medicine.

“In this era of precision medicine, we now know that understanding which patients will respond to which treatments is critical in our effort to save lives. Previously, much of the knowledge about precision medicine has been built based on research on Caucasian patients, and it is a milestone for us in Malaysia to be launching this first clinical trial that is based on genetic markers which are common in Asian women, made possible by research conducted here in Malaysia,” said Associate

Professor Dr Ho Gwo Fuang, Consultant Oncologist and Principal Investigator of the AUROR Trial at UMMC.

The importance (and lack) of Asian representation in cancer research

Asians are seldom represented in cancer research. Take breast cancer for example – doctors are now able to determine the type of cancer a patient has and what treatment might work for her. This is possible with the mapping of the human genome done with the analysis of thousands of breast cancer samples from countries such as the US, UK and Canada. Unfortunately, of the thousands of cancer cell samples analysed, less than 5% were from women of Asian descent.

This means that there are still gaps in our understanding of cancers affecting Asians; in knowing how Asian genes affect our risk to disease as well as our response to treatments. Put simply, we test treatments based mainly on Caucasian profiles, and hope they will work equally well in Asians. While this works in most cases, Cancer Research Malaysia believes we can do better.

This underrepresentation of Asians in cancer research around the world is therefore the *raison d'être* of Cancer Research Malaysia – to ensure Asians are included in the global fight against cancer by conducting research in niche cancers often found in the Asian population.

“This is the first clinical trial launched in Asia to test a feature of breast cancers using a genetic marker that is more common in Asians. We are working on more such clinical trials and hope that more Malaysians will support the work we do; as a non-profit, we depend on contributions to fund our lifesaving research,” added Dr Pan Jia Wern, co-lead of the genomics programme at Cancer Research Malaysia.

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About Cancer Research Malaysia

Cancer Research Malaysia is the only non-profit organisation in Malaysia dedicated to saving lives through impactful research focusing on the Malaysian population and communities across Asia. Our research has already led to the discovery and implementation of new and effective breast cancer prevention strategies and our priority is ensuring that Asians are not left out in the fight against cancer. Together with our partners and supporters, Cancer Research Malaysia's vision is a future free of the fear of cancer. Funding for our lifesaving research depends on donations and sponsorship from the public and corporations. For more information, please visit www.cancerresearch.my or follow us at

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About the AUROR Clinical Trial

The AUROR clinical trial is supported by charitable funding from Khind Starfish Foundation via the Bald and Beautiful 3 campaign, Scientex Foundation, Yayasan Sime Darby, Yayasan PETRONAS and Estee Lauder Group of Companies. Cancer Research Malaysia is funded entirely by donations and grants, and depend on public and corporate contributions to continue finding better ways to prevent, detect and treat cancer. For more information, visit www.cancerresearch.my.

AUROR stands for: [A] Phase II, Single Arm, Open label, Simon Two-Stage St[U]dy of pemb[RO]lizumab in metastatic HER2-negative b[R]east cancer patients: evaluation of impact of germline variants in APOBEC3B

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