

29 July 2011

Embargoed till

1 August 2011, 3pm (EST)

2 August 2011, 4am (Singapore time)

MEDIA RELEASE

New research findings on Gastric Cancer may improve patient response to chemotherapy

Some types of gastric cancer may respond better to chemotherapy drugs and patients with these types of the disease have a greater chance of surviving the illness.

Based on a new way of classifying types of stomach cancers through their genetic make-up, researchers from the Singapore Gastric Cancer Consortium (SGCC) are proposing a new approach to improving the treatment for the disease. The scientists believe that the customisation of treatment to an individual patient's type of tumour will lead to the best chances for good response to treatment, compared to the traditional, standardised therapy which treats everyone the same way. This radically changes the approach to the treatment of stomach cancer.

Applying this newfound knowledge, the SGCC researchers have embarked on a clinical trial to improve treatment for gastric cancer patients here.

Gastric cancer is the second leading cause of cancer death worldwide, killing over 700,000 people each year globally, and is particularly common in East Asia. In Singapore it is the fifth most common cancer in males and seventh in females, killing 330 people each year. Diagnosis of gastric cancer usually occurs at a late stage when treatments are often difficult and unsuccessful. Thus the Singapore government has made it a national priority to find ways to tackle the disease, awarding a S\$25 million dollar translational clinical research (TCR) grant¹ in 2007 to the SGCC.

The SGCC comprises a multi-disciplinary group of scientists and clinicians, from the National University Health System, Duke-NUS Graduate Medical School, National University Cancer Institute, Singapore, National Cancer Centre Singapore, Cancer Science Institute, Singapore, the Genome Institute Singapore and four public hospitals.

The SGCC team succeeded in identifying two new subtypes of gastric cancer, and demonstrated that the classification of these new subtypes may be associated with

¹ TCR grants are a key initiative of the Ministry of Health, administered through the National Medical Research Council and funded by the National Research Foundation. They aim to integrate and facilitate the translation of basic science to clinical research. Such TCR findings would in turn save lives, improve the quality of life of patients and reduce subsequent healthcare expenditure.

differences in patient survival and responses to standard chemotherapy. The study was led by Dr Patrick Tan, Associate Professor in the Cancer and Stem Cell Biology Program, Duke-NUS and will be published in the August issue of *Gastroenterology*, one of the most prominent journals in gastrointestinal disease. Their research suggests that there are indeed different subtypes of gastric cancer with different genetic profiles and patient responses to therapy.

“Our study provides evidence that a genomic classification of gastric cancer could move patients from being treated with uniform ‘one-size-fits-all’ protocols to personalized and optimized treatment strategies, based on the specific genetic profile of their cancer”, said Assoc Prof Tan, who also holds appointments at the Genome Institute of Singapore and the Cancer Sciences Institute of Singapore.

The researchers have taken the findings from their laboratories to the hospital ward, in the form of a clinical trial at the National University Cancer Institute, Singapore (NCIS) and the National Cancer Centre Singapore (NCCS). This trial has admitted 13 patients thus far and plans to recruit up to 90 patients. Participating patients are able to obtain the drug being used in the trial free-of-charge, as this is being provided by the pharmaceutical company participating in the clinical study.

The trial’s lead investigator, Dr Yong Wei Peng, said the aim is to test if the cancer gene subtype can be used to help clinicians customise therapy best suited for the patient.

Traditionally, chemotherapy can improve survivability and quality of life in patients suffering from advanced cancer. The patient response rate is generally higher with a standard three-drug regimen as opposed to a two-drug one at the expense of increased treatment toxicity.

“We hope to demonstrate that in an enriched population, selected using our predictive markers, we can achieve higher response rate without the need of a three-drug regimen”, said Dr Yong, who is a senior consultant at the National University Cancer Institute, Singapore.

Added Dr Choo Su Pin, Senior Consultant of the Medical Oncology department at National Cancer Centre Singapore, “We are glad to recruit patients to this promising translational trial. We are bringing what our colleagues in our laboratories have discovered into the clinic, to potentially benefit our patients.”

Commenting on the significance of the study, Associate Professor Yeoh Khay Guan, SGCC’s Lead Principal Investigator said, “The study and the ensuing clinical trial is a good illustration of translational research, marshalling the power of science to address a critical clinical need. Singapore’s strength is the ability to integrate and combine clinical and scientific expertise to solve important clinical questions, and to bring together different disciplines, approaches and capabilities to solve difficult problems. We hope that these findings will improve treatment outcomes for gastric cancer patients in Singapore.”

Individuals who are interested in finding out more information about the clinical trial may contact Joanne Chio from NCIS at 6772 2611 or NCCS at 6436 8141.

-End-

For media queries and interview requests, please contact:

NUHS

Dawn Sim
NUHS Communications
Tel: 6772 3989, Mobile : 9230 6006
Email: dawn_sim@nuhs.edu.sg

Denise Goh
NUHS Communications
Tel : 6772 3982, Mobile : 9642 0165
Email : denise_goh@nuhs.edu.sg

Duke-NUS Graduate Medical School

Wee Lai Ming
Duke-NUS Communications
Tel: 6516 7258
Email: laiming.wee@duke-nus.edu.sg

+++++

About the Singapore Gastric Cancer Consortium (SGCC)

The Singapore Gastric Cancer Consortium (SGCC) is a national coalition of clinicians and scientists based in universities, research institutes, cancer centres and hospitals, working to improve outcomes for gastric cancer patients. The group aims to solve important clinical questions to improve the care of gastric cancer patients, facilitated by close interaction between clinicians and scientists, and with synergism that enables biologic discoveries in the laboratory to be validated in the clinical setting. Key research projects include risk susceptibility studies, biomarker discovery and validation, the genetic mapping of gastric cancer and clinical trials of new treatment agents. In July 2007, the consortium was awarded the first Translational and Clinical Research (TCR) Flagship Research Grant by the National Research Foundation (NRF) of Singapore. The TCR Flagship Research Grant is a key initiative of the Ministry of Health, administered by the National Medical Research Council and funded by the National Research Foundation of Singapore.

Local collaborators

Cancer Science Institute of Singapore, CSI
Genome Institute of Singapore, GIS

National Cancer Centre Singapore, NCCS
National University Cancer Institute, NCIS
National University Health System, NUHS
Duke-NUS Graduate Medical School Singapore, Duke-NUS
Nanyang Technological University, NTU
National University of Singapore, NUS
Changi General Hospital, CGH
National University Hospital, NUH
Singapore General Hospital, SGH
Tan Tock Seng Hospital, TTSH

International Collaborators

Asia-Pacific Group on Gastric Cancer
Clinical Therapeutics Research Group

About the National University Health System (NUHS)

Established in January 2008, the National University Health System groups the National University Hospital (NUH), NUS Yong Loo Lin School of Medicine and NUS Faculty of Dentistry under a common governance structure to create synergies to advance health by integrating excellent clinical care, research and education.

The enhanced capabilities and capacity will enable the NUHS to deliver better patient care, train future generations of doctors more effectively and bring innovative treatments to patients through groundbreaking research.

For more information about NUHS, please visit www.nuhs.edu.sg

About Duke-NUS Graduate Medical School Singapore

The Duke-NUS Graduate Medical School Singapore (Duke-NUS) was established in 2005 as a strategic collaboration between the Duke University School of Medicine, located in N. Carolina, USA and the National University of Singapore (NUS). Duke-NUS offers a graduate entry, 4-year M.D. (Doctor of Medicine) training programme based on the unique Duke model of education, with one year dedicated to independent study and research projects of a basic science or clinical nature. Duke-NUS also offers M.D/PhD and PhD programmes. As a player in Singapore's biomedical community, Duke-NUS has identified five Signature Research Programmes: Cancer & Stem Cell Biology, Neuroscience and Behavioural Disorders, Emerging Infectious Diseases, Cardiovascular & Metabolic Disorders, and Health Services and Systems Research. For more information, please visit www.duke-nus.edu.sg.