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Singapore conducts landmark study for early detection of liver cancer

06 May 2021 | News

Only 20% of primary liver cancer or hepatocellular carcinoma (HCC) are diagnosed at an early stage, which makes early detection an urgent, unmet healthcare need

A first of its kind cohort study on patients at high risk of developing primary liver cancer also known as hepatocellular carcinoma (HCC), has been launched to diagnose HCC more accurately at an earlier stage and to predict an individual's likelihood of developing the cancer.

HCC is the sixth most common cancer in the world but the third most common cause of cancer deaths globally. In Singapore, HCC is the third and fourth most common cause of cancer deaths, amongst males and females respectively.

While potentially curative treatment is possible with early diagnosis, only 20% of HCC cases are detected at a stage where cure is possible.

This investigator-initiated multi-centre study led by the National Cancer Centre of Singapore (NCCS) called **E**ar**L**y D**E**tection of HCC: miRNA, microbiome and ima**G**ing biom**A**rkers in the evolution of chro**N**i**C** liv**E**r Disease in a high-risk prospective cohort (**ELEGANCE**), addresses this urgent, unmet need for individuals at high risk of developing HCC.

The study involves public and private sector collaboration and has three tracks: 1) to evaluate the efficacy of a miRNA diagnostic kit for HCC with Singapore-headquartered multi-cancer early detection company MiRXES; 2) to develop an AI algorithm for identification of patients at-risk of developing HCC using state-of-the-art quantitative MR imaging, with digital medical technology company, Perspectum, whose Asia Pacific headquarters are in Singapore; and 3) to determine the changes in the microbiome and metabolome that lead to HCC with Southeast Asian precision gut microbiome company AMiLi.

The goal of all three tracks is early diagnosis, better and more cost effective methods for improved patient outcomes and the identification of novel therapeutic targets.