

Hong Kong identifies potential biomarker for early diagnosis of liver cancer

02 February 2022 | News

Identified a key molecule in extracellular vesicles of liver cancer patients

A research team at the Department of Pathology, LKS Faculty of Medicine, The University of Hong Kong (HKUMed) in collaboration with Hong Kong and Mainland researchers has revealed an unrecognised function of patient-derived circulating extracellular vesicles (EVs) in liver cancer metastasis. These ground-breaking findings give insights into early diagnosis and new therapeutic strategy for liver cancer.

Using proteomic profiling to compare circulating EVs obtained from the sera of control individuals and liver cancer patients at early and advanced stages, the team discovered a stepwise upregulation of polymeric immunoglobulin receptor (pIgR) in the circulating EVs from control individuals, cancer patients at the early stage to those at the advanced stage. The level of EV-pIgR decreases in about 70% of patients after surgery. These findings suggest the crucial role of EV-pIgR in liver cancer development and its potentiality as a non-invasive diagnostic marker for liver cancer.

"Our study has identified pIgR as a key component in extracellular vesicles that functions as a potent promoter of liver cancer. The potential utilisation of EV-pIgR as biomarker may improve early diagnosis so as to increase the opportunity of cancer patients to receive curative treatment", said the researchers.