Hepatocellular carcinoma diagnosis, prognosis and treatment may improve by identifying a protein

20 February 2019

They found elevated expression of TonEBP in the tumour tissue of more than 90% of the patients studied. This is remarkable, the researchers say, given that hepatocellular carcinoma is a very diverse cancer in terms of its causative agents, the tumour architecture, how the cancer tissues look under the microscope, and the types of gene mutations involved. In fact, TonEBP was more prevalent than any other molecular marker used to detect hepatocellular carcinoma.

They also found that higher tumour TonEBP expression was associated with larger tumour size, advanced tumour grade, recurrence and its migration to other parts of the body, thus acting as a useful tool in predicting hepatocellular carcinoma prognosis.

TonEBP's role in hepatocellular carcinoma is linked to its involvement in inflammation, the researchers explain. When damaged liver tissue from a virus or alcohol, for example, becomes inflamed, liver fibrosis ensues, followed by cell death and compensatory proliferation of liver cells, and eventually cancer. TonEBP expression increases during the inflammatory phase, stimulating the expression of an enzyme, called cyclooxygenase-2, that leads to the production of prostaglandin E2, a hormone-like compound that promotes tumour formation and progression.

Targeting TonEBP could be an attractive strategy to prevent the development, spread and recurrence of hepatocellular carcinoma, the researchers conclude in their study published in the journal *Gut*.

"We are currently investigating the role played by TonEBP in the recurrence of liver cancer, as well as in chemotherapy resistance," says Kwon.

More information: Jun Ho Lee et al. Tonicity-

Provided by Ulsan National Institute of Science and Technology


This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.