TECHNOLOGY OFFER

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Soluble AXL detects very early Hepatocellular Carcinoma

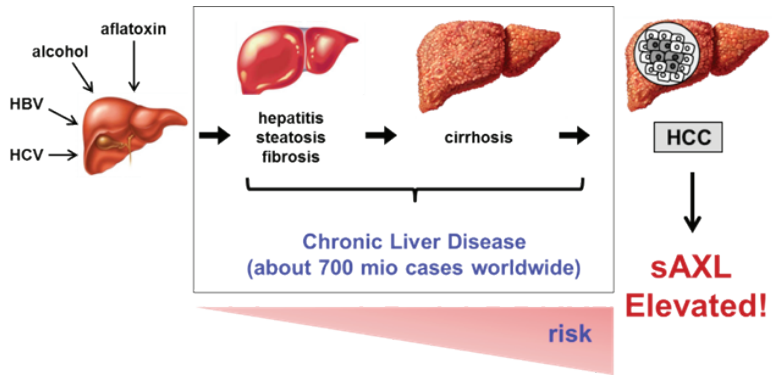
sAXL (a soluble cleavage product of the receptor tyrosine kinase AXL) represents a novel biomarker allowing the detection of very early stage Hepatocellular Carcinoma (HCC).

BACKGROUND

Hepatocellular carcinoma (HCC) is the most frequent liver cancer and the third common cause of cancer mortality worldwide. HCC develops from steatohepatitis, liver fibrosis and cirrhosis that are commonly designated as chronic liver disease (CLD). The majority of HCC patients are diagnosed at late stages allowing only limited therapeutic options and strongly reduced survival of HCC patients. Thus, diagnosis of HCC at early stages is of paramount relevance as curative treatment options such as surgical resection and liver transplantation can be applied.
α-Fetoprotein (AFP) is the diagnostic biomarker of HCC that is determined in peripheral blood. AFP shows a diagnostic sensitivity between 25-60% that is accompanied by limited specificity. AFP together with sonography represents the gold standard to diagnose HCC in routine clinical use. Besides its moderate sensitivity, AFP is insufficient to detect early stage HCC.

TECHNOLOGY

Our recent large scale multi-center study with HCC patients from Europe and China (Reichl et al, 2014) showed that sAXL represents a novel biomarker allowing the detection of very early stage HCC with exceptional high diagnostic sensitivity and specificity. Patients with liver cirrhosis display no increase of sAXL in blood, however, sAXL levels increase in patients with smallest HCC nodes, ensuring the accurate differential diagnosis of high risk patients. sAXL outperforms AFP in detecting very early HCC. In addition, sAXL is a specific diagnostic biomarker of HCC as it fails to detect breast, ovarian or colorectal carcinoma and its secondary malignancy to the liver.



BENEFITS

- sAxl already detectable in very early stages of HCC
- high sensitivity (76,9%) and specificity (69,21%)
- in combination with AFP even higher sensitivity and specificity
- specific for HCC (not detectable in breast, ovarian or colorectal cancer)
- useful as prognostic marker
- screening of high risk patients
- not increased in CLD

REFERENCE:
462.13

AVAILABLE FOR:
- Development partnership
- License agreement

DEVELOPMENT STATUS:
In vitro proof of concept

IPR:
CA2940914 (A1)
AU2015233513 (A1)
US15/126,661
EP2921857 (A1)

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