Detecting an early biomarker for pancreatic cancer in blood
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Pancreatic ductal adenocarcinoma is one of the most aggressive and deadliest forms of cancer. Treatment options are limited because symptoms typically do not appear until the disease is advanced and complete surgical resection of tumors is not possible.

In this issue of JCI Insight, a group of researchers led by Motoyuki Otsuka at the University of Tokyo describe a pilot study of a new method for detecting a pancreatic cancer biomarker in patient serum. Previous work has shown that an RNA known as human satellite II (HSATII) RNA is highly enriched in human pancreatic cancer tissue. This RNA contains repetitive elements that make it difficult to detect with conventional methods.

This study now reports a method to easily and specifically quantify HSATII in blood serum from pancreatic cancer patients. They show in an initial cohort of 20 cancer patients and 20 normal patients that HSATII levels are significantly higher in serum from individuals with pancreatic cancer. They validated these findings in a second cohort of patients and showed that the test could detect patients with intraductal papillary mucinous neoplasm, a precancerous pancreatic lesion.

These studies provide a promising early detection method for pancreatic cancer that can now be tested in a larger cohort of pancreatic cancer patients.

More information: Takahiro Kishikawa et al, Quantitation of circulating satellite RNAs in pancreatic cancer patients, JCI Insight (2016). DOI: 10.1172/jci.insight.86646

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