Blood test may help to diagnose pancreatic cancer

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Indiana University cancer researchers have found that a simple blood test might help diagnose pancreatic cancer, one of the most deadly forms of the disease.

In research published today in the *American Journal of Gastroenterology*, Murray Korc, M.D., the Myles Brand Professor of Cancer Research at the Indiana University School of Medicine and a researcher at the Indiana University Melvin and Bren Simon Cancer Center, and colleagues found that several microRNAs – small RNA molecules—circulate at high levels in the blood of pancreatic cancer patients.

"This is a new finding that extends previous knowledge in this field," Dr. Korc said. "The key new feature here is that there is a panel of microRNAs that can be measured accurately in the plasma component of blood to determine if a patient has pancreatic cancer."

Specifically, the IU research team found that an increased expression of miRNA-10b, -155, and -106b in plasma appears highly accurate in diagnosing pancreatic ductal adenocarcinoma. Pancreatic ductal adenocarcinoma is by far the most common type of pancreatic malignancy.

Dr. Korc and colleagues made the discovery by examining plasma, bile, pancreatic juice or a combination, which had been collected from 215 patients either immediately before or during an endoscopy.

Dr. Korc pointed out that additional studies are needed to confirm that a blood test could be an effective method of diagnosing pancreatic cancer.

"It may be possible to use a blood test to screen individuals who are at high risk for developing pancreatic cancer," Dr. Korc said. "We are planning to conduct such studies. It will be important to identify additional markers and to assess how useful a panel of such markers would be for the early diagnosis of this cancer. Based on our findings, this test could also be useful to differentiate between pancreatic cancer and chronic pancreatitis."

Such a marker would be an advance against metastatic pancreatic cancer because current treatments typically extend a person's life for only six to 16 weeks. Pancreatic cancer is difficult to detect and diagnose because there are no noticeable signs or symptoms in the early stages and because the pancreas is hidden behind other organs such as the stomach, small intestine, liver, gallbladder, spleen and bile ducts.

Only 6 percent of people with the disease survive more than five years after diagnosis. According to the National Cancer Institute, there will be an estimated 46,420 new cases of pancreatic cancer and 39,590 deaths from the disease in 2014.

Provided by Indiana University