Blood test may spot pancreatic cancer earlier

May 20 2014, by Dennis Thompson, Healthday Reporter

Other research cites advances in treatment of this deadly disease.

(HealthDay)—Researchers report that a new blood test could help doctors find pancreatic cancer at an earlier stage, potentially improving a patient's chances of survival.

A set of four "markers"—or signs—in the blood identified cases of pancreatic cancer nine out of 10 times, sorting malignancies from other diseases like chronic pancreatitis or pancreatic cysts.

The blood test will be particularly helpful in ruling out suspected cases of pancreatic cancer, saving those patients from extremely invasive screening procedures, said study author Dr. Ayumu Taguchi, an assistant professor at the MD Anderson Cancer Center at the University of Texas, in Houston.

Pancreatic cancer is hard to detect early because it does not cause symptoms right away, and when symptoms do appear they are often vague and slight.

Other teams are also working on new treatments that could improve the survival chances of people diagnosed with pancreatic cancer, according to two other studies also presented Monday at an American Association for Cancer Research (AACR) special conference on pancreatic cancer, in New Orleans.

One study, done in mice, identified a protein that appears to keep immune cells from attacking pancreatic tumors. By blocking the protein, doctors hope to improve the immune system's ability to target and destroy the cancer.

The second study found that radioactive cancer-killing antibodies can more than double survival rates if patients receive repeat treatments combined with a drug that enhances the effects of radiation.

In the blood test study, doctors began with a known pancreatic cancer biomarker called CA 19-9. They then tested 20 other potential biomarkers, using blood samples taken from pancreatic cancer patients, healthy people and patients with chronic pancreatitis.

Once they had boiled down the potential biomarkers to a panel of four, they then tested them against blood samples from two other independent sets of people.

The blood test outperformed a test that solely relied on CA 19-9, researchers found. It accurately ruled out non-cancer cases between 91 percent and 94 percent of the time, while CA 19-9 alone could only rule out these cases 76 percent to 78 percent of the time.

While this test will be useful in helping sort out suspected cancer cases, it is not likely to become a screening tool used to regularly detect pancreatic cancer in the average patient, said Dr. Andrew Lowy, co-chair of the AACR special conference and chief of surgical oncology at the University of California, San Diego.

"It would be highly unlikely that a test could be developed that would be used as a mass screening tool, because the incidence of pancreatic cancer is not high enough. A test would have to be just about perfect, otherwise there would be too many false positive results," Lowy said. "It's much more likely a test like this would be applied to high-risk populations, which are being increasingly well-defined by genetic studies."

Taguchi plans to further test this panel using larger numbers of blood samples. He said research also continues into other potential biomarkers that could improve detection of pancreatic cancer.

The two treatment studies both involved ways to use parts of the body's immune response to target pancreatic cancer.

In the first study, doctors identified a protein called CD47 that appears to mask pancreatic cancer cells from detection by the immune system.

"CD47 is a widely expressed cell surface protein that functions as a 'don't eat me' signal," said lead researcher Dr. Geoffrey Krampitz, a doctoral candidate in the laboratory of Dr. Irving Weissman, director of the Institute for Stem Cell Biology and Regenerative Medicine at Stanford University School of Medicine and the Ludwig Center for Cancer Stem Cell Research at Stanford.

In mouse tests, doctors found they could cause dramatic tumor regression by blocking CD47 function, which allows immune cells to detect and attack the cancer, Krampitz reported. Although findings from

animal trials often don't hold true in human studies, the researchers said they hope to begin clinical trials in the not-too-distant future.

The second study involved the use of antibodies to carry a radiation source directly to cancer cells, killing them in a more targeted way than conventional radiation beam therapy.

Researchers from the Digestive Disease Institute at Virginia Mason Medical Center found that antibodies designed to carry radiation to a cancer worked particularly well when combined with gemcitabine, a drug that enhances the effects of radiation therapy.

The combined therapy improved survival rates by about 40 percent in patients who received both the antibodies and gemcitabine. In addition, people survived more than twice as long if they received the combination therapy, compared to receiving the antibodies alone.

A larger trial is underway to confirm these results, those researchers said.

Research presented at meetings should be considered preliminary until published in a peer-reviewed journal.

More information: For more information on pancreatic cancer, visit the American Cancer Society.