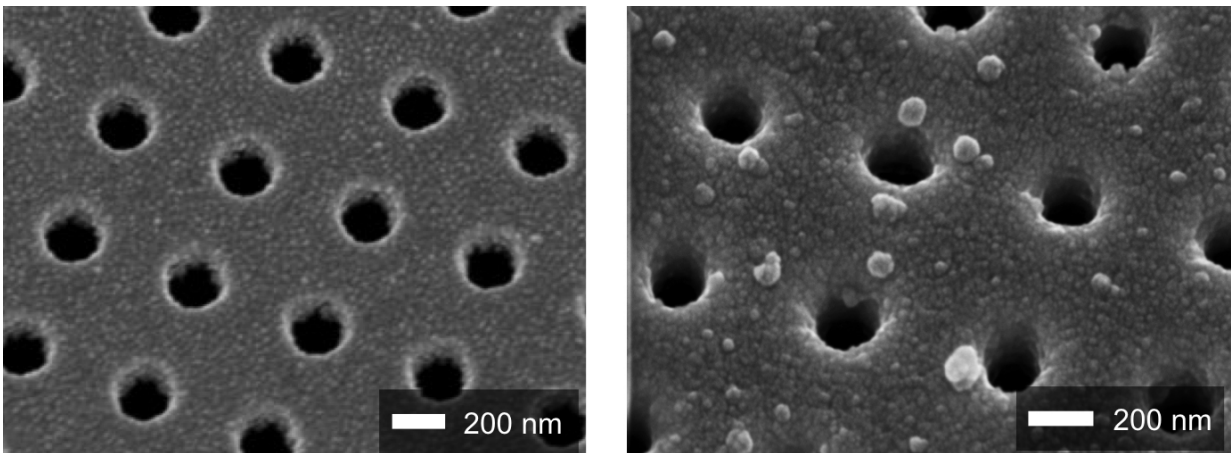


Blood test for pancreatic cancer shows early promise

May 24 2017, by Amy Norton, Healthday Reporter



Nanoscale image of the surface of a new sensor chip that can diagnose pancreatic cancer from small circulating markers isolated from patient serum (small spheres shown in right panel). Credit: K.S. Yang et al., Science Translational Medicine (2017)

Scientists say they've developed a new blood test for identifying pancreatic cancer—a step that might eventually allow earlier diagnosis.

Pancreatic [cancer](#) is a particularly deadly type of tumor because it's often detected too late for effective treatment.

The still-experimental test detects a bundle of proteins churned out by [pancreatic tumors](#).

And it appears to be more accurate than a currently available test for a protein called CA19-9, according to the study findings.

That CA 19-9 test is "very imperfect," said Dr. Cesar Castro, one of the researchers on the new study.

For one, levels of CA 19-9 often rise only in the later stages of [pancreatic cancer](#), according to Castro, an oncologist at Massachusetts General Hospital in Boston.

Plus, a spike in the protein is not specific to the cancer. It can go up when the pancreas is inflamed, for example, or when there is a blockage in the bile ducts.

Measuring CA 19-9 can be useful to track patients' progress during treatment, Castro said.

But it's a "terrible diagnostic marker," he added.

It's estimated that almost 53,700 Americans will be diagnosed with [pancreatic](#) cancer this year, according to the U.S. National Cancer Institute. More than 80 percent develop a form called [pancreatic ductal adenocarcinoma](#) (PDAC).

Few people survive the disease because it's rarely caught early, when it can be treated with surgery. The symptoms, which include weight loss and jaundice, usually arise only after the disease has spread.

Of all Americans diagnosed with pancreatic cancer, only 8 percent are still alive five years later, the cancer institute says.

Scientists have been working to find markers, or indicators, of early pancreatic cancer—such as proteins in the blood that consistently and

specifically signal the presence of the disease.

The ultimate goal is to find a test that can screen people for pancreatic cancer, catching it before symptoms arise, said Dr. Peter Kingham.

Kingham, who was not involved in the new study, specializes in treating pancreatic cancer at Memorial Sloan Kettering Cancer Center in New York City.

"Unlike with some other cancers, we have no screening test for pancreatic cancer," Kingham said. "We'd love to have some test that's used like mammography for breast cancer, or colonoscopy for colon cancer."

He said the results with the new blood test are "impressive in comparison with CA 19-9."

But, Kingham cautioned, it needs to be studied in larger groups of patients to get a better gauge of its accuracy.

The test uses a chip technology that analyzes structures called extracellular vesicles, or EVs, which are churned out by cells into the bloodstream.

EVs can come from both normal cells and cancer cells. But Castro's team found that those containing a "signature" of five specific proteins were a good marker of pancreatic cancer.

In one phase of the study, the researchers used blood samples from 43 patients who'd undergone surgery for either PDAC or noncancerous conditions, including pancreatitis (where the organ becomes inflamed).

The scientists found that testing for the five proteins detected 86 percent

of the pancreatic cancer cases.

The test also had a "specificity" of 81 percent. That suggests it would accurately give a negative result to 81 percent of people who do not have pancreatic cancer.

However, Castro agreed that the study group was too small to draw any conclusions.

Some aspects of the testing have been automated, Castro said. Right now, it could be done in about 10 minutes, at a cost of \$60 a patient, the researchers said.

The big longer-term question is whether the test could be good enough and practical enough to be used for screening.

To get answers, Castro said, studies could first look at patients at high-risk of pancreatic cancer because of a strong family history of the disease.

But ultimately, he said, the hope is to develop a screening [test](#) that can be used for the general population.

Castro and some of his colleagues on the study are inventors on a patent application covering technology used in the research. Two researchers are consultants to Exosome Diagnostics, Inc., which licensed the patent application.

The study was published May 24 in *Science Translational Medicine*.

More information: K.S. Yang et al., "Multiparametric plasma EV profiling facilitates diagnosis of pancreatic malignancy," *Science Translational Medicine* (2017). [stm.sciencemag.org/lookup/doi/ ...](http://stm.sciencemag.org/lookup/doi/...)

scitranslmed.aal3226

Copyright © 2017 [HealthDay](#). All rights reserved.

Citation: Blood test for pancreatic cancer shows early promise (2017, May 24) retrieved 24 April 2024 from <https://medicalxpress.com/news/2017-05-blood-pancreatic-cancer-early.html>

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.