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## Family helps doctors trace pancreatic cancer gene

By Maggie Fox, Health and Science Editor

WASHINGTON (Reuters) - A gene that helps cells keep their shape also causes pancreatic cancer when mutated and it might provide clues to what causes the lethal disease and how it spreads so fast, researchers said on Monday.

They found the gene, called "palladin," in a family plagued by the cancer.

"Nearly every person who develops pancreatic cancer will die from it, the majority within the first year of diagnosis," the researchers wrote in their report, published in the Public Library of Science journal PloS Medicine.

Pancreatic cancer is the fourth-leading cause of cancer deaths in the United States. It will kill 95 percent of the 32,000 people who get it this year, according to the American Cancer Society.

At least 10 percent of cases are thought to be inherited.

Dr. Teresa Brentnall, an associate professor of medicine at the University of Washington, learned of a family in which 18 members, over four generations, had died of pancreatic cancer.

Her team tested the family and found the mutated palladin gene in the cancer patients, while healthy relatives lacked the mutation.

The mutation causes cells to overproduce palladin. The researchers also found that some people who have sporadic pancreatic cancer -- not linked to any family history of the disease -- had the same mutation.

"We finally found what we had so doggedly pursued -- a gene that was expressed 21 times more than any other," Brentnall said in a statement.

"Every one of the members of Family X who had the palladin mutation got pancreatic cancer or pre-cancer, while the members of Family X who did not have the mutation were cancer-free."

Brentnall and her team hope to develop a blood screening test for pancreatic cancer using the palladin protein.

Dr. Carol Otey of the University of North Carolina School of Medicine discovered palladin in 2000. It was named after the 16th-century Italian architect Palladio because it is important to the cell's scaffolding, called the cytoskeleton.

"Now we find it implicated in pancreatic cancer," Otey said in a statement.

Brentnall said a normal cytoskeleton "holds up the cell wall and gives it direction to sit down in its proper place and basically to behave.

"In cancerous cells, the cytoskeleton doesn't work correctly, and instead of sitting, the cells get up and invade areas where they don't belong, which is how the cancer spreads. This is a new way of thinking about cancer development in the pancreas."

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