



PANCREATIC CANCER: What you need to know

Pancreatic cancer seems to make headlines when it claims the life of a celebrity like Steve Jobs or Patrick Swayze. But in 2015 alone, more than 40,500 people are expected to die from pancreatic cancer in the United States.

Pancreatic cancer begins in the tissues of the pancreas, an organ located behind the stomach that contains **exocrine** and **endocrine** glands. Exocrine glands make digestive enzymes that enable you to break down food and absorb nutrients. Endocrine glands make hormones that are released into the bloodstream, including insulin and glucagon.

PANCREATIC GROWTHS

A variety of growths can occur in the pancreas, including cancerous, precancerous and benign tumors.

Serous cystic neoplasms are watery tumors that are almost always benign. *Mucinous cystic neoplasms* are slow-growing tumors filled with a jelly-like substance that can progress to cancer over time. *Intraductal papillary mucinous neoplasms* grow in the pancreatic ducts and can become cancer over time if not treated.

Exocrine tumors

Exocrine tumors are by far the most common

type of pancreatic cancers. *Pancreatic adenocarcinoma* is a cancer that starts in gland cells. About 95 percent of pancreatic exocrine cancers are adenocarcinomas.

Endocrine tumors

Tumors of the endocrine, also known as pancreatic neuroendocrine tumors (NETs), make up less than 4 percent of all pancreatic cancers and offer a generally better outlook than pancreatic exocrine cancers. These include *gastrinomas* (half of which are cancerous) and *insulinomas* (most are benign).

CONTROLLABLE RISK FACTORS

- **Tobacco use** - Smoking doubles your risk. About 20 percent to 30 percent of exocrine pancreatic cancer cases are believed caused by cigarette smoking.
- **Obesity** - Very overweight (obese) people are about 20 percent more likely to develop pancreatic cancer.
- **Chemical exposure** - Heavy exposure to certain pesticides, dyes and chemicals used in metal refining may increase the risk of developing pancreatic cancer.

NON-CONTROLLABLE RISK FACTORS

- **Age** - Almost all patients are older than 45. The average age at the time of diagnosis is 71.
- **Gender** - Men are 30 percent more likely to develop pancreatic cancer than women.
- **Race** - African Americans are more likely to develop pancreatic cancer than Caucasians.
- **Genetic syndromes** - Abnormal genes may cause as many as 10 percent of pancreatic cancers.
- **Diabetes** - Pancreatic cancer is more common in people who have diabetes. In some people, though, the cancer seems to have caused the diabetes. This can happen when cancer spreads through the pancreas and damages the insulin-making cells.
- **Chronic pancreatitis**
- **Cirrhosis of the liver**
- **Stomach problems** - Infection of the stomach with the ulcer-causing bacteria *Helicobacter pylori* may increase the risk of getting pancreatic cancer.

The five-year survival rate for exocrine pancreatic cancer is 14% for stage I and 1% for stage IV

DIAGNOSING

Unfortunately, pancreatic cancer is hard to find early. Tumors can't be seen or felt during routine physical exams, and patients usually have no symptoms until the cancer has already spread to other organs. Often when patients are diagnosed, the



cancer has already spread.

Those with a known family history can be tested for certain genetic risk factors. For these individuals, an endoscopic ultrasound has been used with success to detect pancreatic cancer early.

Several promising diagnostic tests are in the research phase and include a blood test and a saliva test.

TREATMENT

The following treatments are often used in combination to improve the outcome.

Surgery - Surgery can be used to remove the cancer entirely or to alleviate pain and symptoms, offering comfort. Surgery in this organ is difficult and risky.

Ablation - Ablation treatments destroy tumors with extreme heat or cold. These treatments alleviate symptoms, but typically don't cure cancer.

Embolization - The doctor injects substances into an artery to try to block the blood flow to cancer cells, causing them to die.

Radiation therapy - High-energy rays are used to kill and shrink cancer cells.

Chemotherapy and other drugs - Chemotherapy is the use of drugs to kill cancer cells administered intravenously or orally.

Source: <http://www.cancer.org>

SYMPTOMS

Exocrine Pancreatic Cancer

Early pancreatic cancers often do not have any signs or symptoms. By the time they do cause symptoms, they have often already grown through the pancreas or spread beyond it. Possible symptoms include:

- **Jaundice**
- **Abdominal or back pain** - from an enlarged tumor pressing on nearby organs
- **Weight loss and poor appetite**
- **Digestive problems** - Stools become unusually pale, bulky, greasy and float in the toilet
- **Gall bladder enlargement**
- **Blood clots**

Endocrine Pancreatic Cancer (NET)

- **Gastrinomas** - Excess stomach acid, ulcers, diarrhea, weight loss
- **Insulinomas** - Hypoglycemia dizziness, passing out

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