Cancer

Pancreatic Cancer

What is pancreatic cancer?

Cancer develops when cells grow out of control. The most common kind of primary pancreatic cancer, meaning it starts in the pancreas, is adenocarcinoma of the ductal epithelium. This accounts for about 80 percent of cancers of the pancreas.

Who gets pancreatic cancer?

About 53,600 people are diagnosed with cancer of the pancreas and about 43,000 die from it annually, according to the American Cancer Society. Pancreatic cancer accounts for only about 3 percent of all cancers in the United States, but it is the fourth leading cause of cancer death in both women and men.

Age is an important risk factor for pancreatic cancer, and rates go up after age 50. Pancreatic cancer is unusual in people younger than 45. Men are slightly more likely than women to get pancreatic cancer. African-American men have the highest incidence, while black women and white men have similar rates.

What are the risk factors for pancreatic cancer?

About 25 percent of pancreatic cancers are related to tobacco smoking, with the risk rising with larger numbers of cigarettes and more years of smoking. About 15 percent of cases occur in people with a family history of pancreatic cancer. Obesity, certain genetic conditions, a history of chronic pancreatitis (inflammation of the pancreas) and heavy alcohol use (which can cause pancreatitis) also contribute to increased risk.

What are the symptoms of pancreatic cancer?

The pancreas, an organ that sits behind the stomach, produces enzymes that are released into the intestines to help digest food. Cells within the pancreas (known as islets of Langerhans) produce the hormones insulin and glucagon, which control blood sugar levels. Most pancreatic cancers are exocrine cancers in the ducts of the pancreas. About 5 percent are endocrine or neuroendocrine tumors, some of which produce hormones.

Cancer of the pancreas generally has no symptoms, making it difficult to detect at early stages, when it is easier to treat. Symptoms typically start once tumors have spread beyond the pancreas; these may include:

- Unexplained fatigue or weakness
- Pain in the upper abdomen
- Bloated or swollen abdomen
- Diarrhea or constipation
- Nausea or vomiting
- Loss of appetite
- Unexplained weight loss
- Jaundice (yellowing of the skin and eyes)
- Fever or chills
- Dark urine or pale stools

How is pancreatic cancer diagnosed?

Early detection and treatment of cancer increases the likelihood of long-term survival. The process of diagnosis starts with a physical exam and medical history, including family history and how long symptoms have been present. The physical exam will check for abdominal swelling, swollen lymph nodes and other possible indicators. Blood and urine tests may be ordered for substances that could indicate cancer.

X-rays, computed tomography (CT), positron emission tomography (PET), MRI or ultrasound scans may be done to see how extensive the cancer is and how much it has spread. If a mass is detected, a small tissue sample (a biopsy) may be removed to examine in the laboratory.

How is pancreatic cancer treated?

Treatment for cancer of the pancreas depends on how advanced the cancer is when it is detected, including the type of tumor, how many there are, how large they are and whether cancer has spread to nearby lymph nodes and other parts of the body, a process known as metastasis.

Surgery: Surgery is the main type of treatment for cancer of the pancreas. Usually this involves removal of either part or all of the pancreas and sometimes nearby structures such as the bile duct or part of the intestine.

Ablation: Pancreas tumors may be ablated, or destroyed, using a variety of methods, including freezing (cryotherapy) or heating with radio waves (radiofrequency ablation) or microwaves.

Embolization: Chemicals may be used to block or reduce blood flow to tumors.

Radiation: Radiation may be used to kill cancer cells that remain after surgery or to shrink tumors that cannot be surgically removed. It is often used in conjunction with other forms of treatment.

Chemotherapy: Traditional chemotherapy works by killing fast-growing cells, including cancer

cells. It can also destroy rapidly dividing healthy cells, such as those in the gut or hair follicles, leading to side effects like nausea and hair loss.

Targeted therapy: Targeted drugs work against cancers with specific characteristics. For example, they may interfere with signaling pathways that regulate cell growth. Targeted treatment is often better tolerated than chemotherapy, but cancer may develop resistance over time.

Immunotherapy: The newest type of treatment helps the immune system fight cancer. For example, some tumors can turn off immune responses against them, and drugs known as checkpoint inhibitors can restore T cells' ability to recognize and destroy cancer cells. This type of treatment has shown some promise for treating pancreatic cancer, but current immunotherapy drugs work for only a subset of patients and it is hard to predict who will benefit.

For more information about pancreatic cancer, please visit our sister site Cancer Health.

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