CENTER FOR DIGESTIVE HEALTH & NUTRITION
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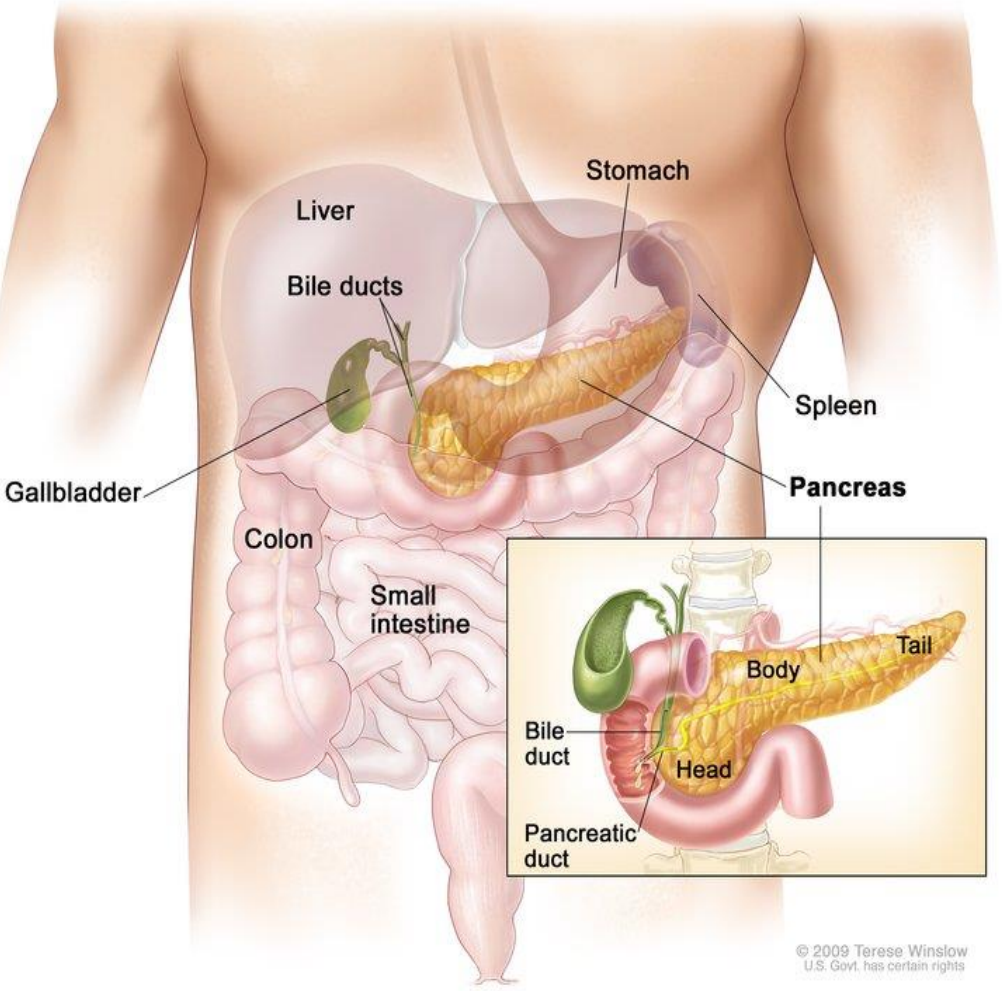
Pancreatic Cancer

The pancreas is a pear-shaped organ about 6" in length. It is located behind the stomach organ in the back of the upper abdomen. The pancreas plays a dual role in our body. It produces insulin to help regulate our blood sugar, and it produces enzymes that help with digestion. Anatomically, it is divided into the head, body and tail.



What is pancreatic cancer?
Pancreatic cancer arises when cells within the pancreas change, leading to uncontrolled growth. These rogue cells cluster together, forming tumors. If left unchecked, these cancer cells can venture beyond the pancreas (metastasize), invading other parts of the body.

There are two main types of pancreatic cancers:

1. Over 90% of all pancreatic tumors are pancreatic ductal adenocarcinoma, which starts in the ducts of the pancreas. These ducts transport digestive enzymes from the pancreas and into the small intestine.
2. Less than 10% of pancreatic tumors arise from the insulin-producing islet cells, termed neuroendocrine tumors (NETs). Islet cell carcinoma is another name for an NET.

Symptoms to Watch Out For
While early detection is challenging, specific symptoms can suggest the presence of pancreatic cancer. These include:

- Persistent abdominal pain that may radiate to the back, which often intensifies when lying down or after eating.
- A sudden loss of appetite or unexplained weight loss, often accompanied by nausea or vomiting,
- Jaundice, evident by a yellowing of the skin or eyes, may occur when the liver's bile duct gets blocked by the tumor.
- Changes in stool and urine color, with stools becoming lighter and urine darker. This is another consequence of bile duct obstruction.

Who is at risk?
Certain factors can elevate the risk of developing pancreatic cancer. These include:

- Age, with most diagnoses occurring after 65. However, it can occur at younger ages, especially if other risk factors are present.
- Smoking tobacco doubles the risk. Chemicals in cigarettes damage the DNA of pancreatic cells.
- Pre-existing conditions like chronic pancreatitis (long-term inflammation of the pancreas).
- Obesity and type II diabetes are risk factors.
- A family history of pancreatic cancer or genetic syndromes known to increase cancer risk, such as BRCA2 gene mutation, or Lynch syndrome
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Diagnosis and treatment

1. Blood tests.

   Sometimes, certain proteins in your blood will rise when pancreatic cancer is present. These are called tumor markers. The tumor marker CA 19-9 is the one most closely tied to pancreatic cancer. The problem with this marker is that it can go up even when a

person may not have pancreatic cancer and may not go up even if a person does have pancreatic cancer. This is why doctors usually advise against blood testing for CA 19-9. Some doctors may order this test, however, if there are symptoms closely matching pancreatic cancer.

2. Diagnostic Imaging
   When pancreatic cancer is suspected, doctors will recommend various diagnostic imaging tests, such as ultrasounds, CT scans, MRIs, and PET scans.

3. Staging laparoscopy
   Sometimes, providers use laparoscopy to determine the extent of pancreatic cancer and whether removal is possible. During this "bandaid-surgery", a surgeon creates a few small incisions (cuts) in your abdomen and inserts a long tube with a camera on the end. This allows them to see inside your abdomen and look for abnormalities. Often, they'll take a biopsy during the same procedure.

Once diagnosed, the treatment plan is tailored to the individual, considering factors like overall health, the cancer's stage, and the patient's preferences. Treatment options encompass chemotherapy, which uses drugs to kill cancer cells; radiation, which uses high-energy beams to target the tumor; and surgery, which removes the tumor and surrounding tissue.

Prognosis
The chance of successful treatment and a cure for pancreatic cancer depends on the extent of disease and the cell type.

Pancreatic adenocarcinoma (which is the most common form of pancreatic cancer)
Alarmingly, pancreatic cancer often remains undetected in its early stages, as it seldom exhibits symptoms until it has advanced and spread to other organs. Sadly, with treatment, the current 5-year survival rate of newly diagnosed pancreatic ductal adenocarcinoma carcinoma with treatment is only about 11%.

Pancreatic Neuroendocrine (NET) or Islet Cell cancer
This less common form of pancreatic cancer is highly curable with a five-year survival of about 90% after surgical resection.

Apple Computer founder **Steve Jobs** died at age 56 of highly curable pancreatic NET cancer which has a 90% cure rate. His doctors advised him to seek surgery as soon as possible. Instead, he delayed the procedure for nine months and attempted to treat himself with alternative medicine. I don't believe he really understood. By the time he finally agreed to traditional treatment, it was too late. His NET cancer had spread to his liver and even a heroic attempt at liver

transplant did not save him. If he had had agreed to have surgery at the time of his diagnosis, he would probably still be alive today. All his billions of dollars did not protect him from bad judgement.

Screening

Routine screening for pancreatic cancer isn't currently recommended. If you have a strong family history of the condition (more than one blood relative with the disease), your doctor may suggest that you undergo genetic counseling. A genetic counselor can explain the process of genetic testing and how to interpret the results. Remember, genetic screening can help identify genes or gene mutations to your DNA that may increase your risk of pancreatic cancer. It does not test for or identify pancreatic cancer itself. It's important to keep in mind that if you have an inherited gene or mutation linked to pancreatic cancer, you have a greater risk of the disease. This does not mean that you have or definitely will develop this type of cancer. High risk individuals may be advised to undergo periodic imaging studies like CT or MRI.

The Future

Ongoing research focuses on early detection through genetic testing and new imaging methods. Trials are underway using tumor markets and periodic imaging studies in high-risk individuals. Additionally, clinical trials testing new treatments are available, offering hope for better outcomes.

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The Center for Digestive Health & Nutrition is a private medical practice comprised of experienced Gastroenterologists, Nurse Practitioners, and staff members dedicated to preventing and treating digestive disorders. Our physicians have been serving the needs of those in Western Pennsylvania and surrounding areas since 1977, having cared for tens of thousands of individuals with digestive problems. Our mission is to deliver high-quality gastroenterology services efficiently and cost-consciously. We realize the very sensitive nature of GI illness and understand the necessity to provide our services in an environment that stresses patient privacy and confidentiality and where patient satisfaction is the goal. Appointments can be conveniently scheduled online via our website above. Learn more about digestive issues on Instagram @thedigestivetract