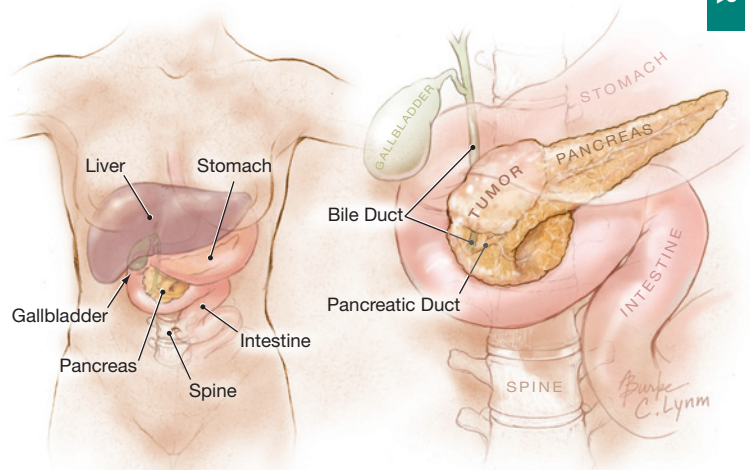


Pancreatic Cancer

The **pancreas** is a gland that lies deep in the abdomen behind the stomach, near the intestines, and on top of the spine. It is responsible for producing juices that help digest food and for making hormones such as **insulin** (regulates blood sugar levels). **Pancreatic cancer** (cancer of the pancreas) is a serious disease, being the fourth leading cause of cancer-related deaths in the United States. The January 17, 2007, issue of *JAMA* includes an article about treatment of pancreatic cancer. This Patient Page is based on one previously published in the December 14, 2005, issue of *JAMA*.



SIGNS AND SYMPTOMS

- **Jaundice**—yellowing of the skin and the whites of the eyes
- Unintended weight loss
- Upper abdominal pain
- Back pain
- Loss of appetite

TESTING FOR PANCREATIC CANCER

Because of its location, pancreatic cancer is difficult to detect. In addition to considering your medical history and performing a physical examination, your doctor may order certain tests.

- Blood tests to evaluate liver function
- Ultrasound of the abdomen—sound waves to help detect blockages of the pancreatic or bile ducts
- Computed tomography scan—a computerized x-ray with injected dye showing a detailed picture of the abdomen to detect blockages of the pancreatic and bile ducts and any abnormal masses
- Magnetic resonance imaging or magnetic resonance cholangiopancreatography—a picture of the abdomen using magnetic waves to detect masses or blockages
- **Endoscopic retrograde cholangiopancreatography**—a procedure performed by a **gastroenterologist** (doctor who specializes in digestive diseases) in which a lighted scope is placed down the throat through the stomach and into the intestine. Dye is then injected to visualize the pancreatic and bile ducts. **Biopsies** (removal of samples of tissue for diagnosis) may also be performed. For **endoscopic ultrasound**, the scope is used along with ultrasound to help detect a mass.
- **Percutaneous transhepatic cholangiopancreatography** may be performed by a **radiologist** (doctor who specializes in using radiation to diagnose and treat disease). A needle is placed into the liver from outside the body. Dye is then injected into the hepatic ducts of the liver in order to detect any masses in the pancreatic or bile ducts.

Sources: National Cancer Institute, American Cancer Society

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TREATMENT

Surgery is the first choice for treating pancreatic cancer. However, for many patients surgery is not possible due to the location of the cancer or advanced stage of the disease. **Chemotherapy** (drugs that kill cancer cells) or **radiation therapy** (high-energy x-rays that kill cancer cells) may be offered after surgery or at times when surgery is not possible. A number of treatments are available to help relieve the symptoms of pancreatic cancer such as pain, jaundice, and weight loss.

FOR MORE INFORMATION

- Pancreatic Cancer Action Network
www.pancan.org
- National Cancer Institute
www.cancer.gov
- American Cancer Society
www.cancer.org

INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at www.jama.com. Many are available in English and Spanish. A Patient Page on pancreatitis was published in the June 16, 2004, issue.

