

## FEATURE ARTICLE

# Identifying Early Symptoms of Pancreatic Cancer

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Pancreatic cancer is one of the leading causes of cancer death in the United States. Surgical resection of tumors is considered the only curative form of treatment and can occur only when tumors are diagnosed early. Currently, researchers are attempting to develop screening tests to detect pancreatic cancer while at an early stage. Until the tests are perfected, primary care providers need to be aware of the earliest symptoms of pancreatic cancer and know which tests will assist in diagnosing pancreatic cancer at an early stage. The purpose of this article is to educate primary care providers about the early symptoms of pancreatic cancer and appropriate diagnostics to order.

**P**ancreatic cancer is the ninth most common cancer (Von Hoff, Evans, & Hruban, 2005) and the fourth-leading cause of cancer deaths in the United States (Dunn, Michael, & Stevens, 2002). Every year, approximately 32,000 Americans are diagnosed with pancreatic cancer. It strikes 5 out of every 100 people (Johns Hopkins University, 2007). An almost equal number of patients will die from pancreatic cancer in 2007 (Johns Hopkins University, 2007).

Pancreatic neoplasms are classified into five cancer types. Ductal pancreatic cancer comprises 65% of tumors (see Figure 1). Local or metastatic spread of this type of pancreatic cancer at the time of diagnosis results in 80% of tumors being considered unresectable as well as a 4% five-year survival rate (Hruban & Ali, 2005). Twenty-five percent of pancreatic neoplasms are considered other periampullary cancers and include duodenal, ampullary, and distal common bile duct cancers. The 5- and 10-year survival rates for those tumors vary from 24%–56% and are directly dependent on the histologic type, grade, and size of the tumor and the presence of metastasis (Mino & Lauwers, 2005). Mucinous cystic neoplasms are noninvasive, comprise 5% of pancreatic neoplasms, occur almost exclusively in perimenopausal women, and have a five-year survival rate of greater than 70% (Von Hoff et al., 2005).

Risk factors for the development of pancreatic cancer are listed in Figure 2. Few pancreatic cancers have been related to genetic familial predisposition. Thus, the prevailing philosophy among practitioners is that environmental and genetic factors have a role in the development of pancreatic cancer (Von Hoff et al., 2005).

## Screening for Pancreatic Cancer

Anorexia, early satiety, and sudden onset asthenia are early symptoms that may be present six months before the more common symptoms of pancreatic cancer, which include abdominal pain and jaundice (Gullo, Tomassetti, Migliori, Casadei, & Marrano, 2001). Also, dysgeusia, diabetes mellitus, pancreatitis,

### At a Glance

- ♦ Pancreatic cancer is diagnosed in 32,000 people annually, and patients have a life expectancy of 6–12 months.
- ♦ Knowledge of the early, nondescript symptoms of pancreatic cancer can promote early diagnosis, resulting in less invasive treatment.
- ♦ Nurses are in a key position to decrease the morbidity and mortality associated with pancreatic cancer.

pruritis, psychological disturbances, skin changes, and thrombophlebitis may be present for as long as 24 months prior to the onset of pain or jaundice (Von Hoff et al., 2005).

Currently, no prevention or screening strategies for pancreatic cancer exist. Presenting clinical complaints and laboratory results may be nonspecific or normal. Despite such challenges, early detection and diagnosis result in a better prognosis. Thus, the challenge for clinicians is to develop an algorithm that allows the disease to be diagnosed while in an early stage. Demographic information such as age may be used as an initial screening factor. Pancreatic cancer is rare in individuals younger than 40 but is present in greater numbers among those aged 70–80. Diabetes mellitus, a prior history of pancreatitis, any history of abdominal surgery, a family history of pancreatic cancer, and smoking increase the susceptibility for this disease. Although

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