The median survival of patients with metastatic pancreatic cancer is three to six months, making the diagnosis difficult to accept for patients, family, and healthcare providers. Therapeutic options are improving, but the treatment of advanced disease remains palliative. For oncology nurses, understanding the therapeutic and palliative options can provide these patients and their caregivers with additional information to make appropriate and individualized healthcare decisions.

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Pathophysiology

The pancreas is located behind the stomach and is about six inches long, fewer than two inches wide, and extends horizontally across the abdomen (see Figure 1). The head of the pancreas is on the right side of the abdomen, behind the site where the stomach meets the duodenum. The body of the pancreas is located behind the stomach and the tail is on the left side of the abdomen, next to the spleen. About 60%–70% of pancreatic cancers involve the head of the pancreas (Coleman, 2005). Twenty percent of pancreatic cancers have invaded the duodenum at diagnosis (Coleman, 2005; Freelove & Walling, 2006). The most common sites of metastatic disease from pancreatic cancer are the liver—via the lymphatic system—and peritoneum (Hidalgo, 2010; Mulcahy, Wahl, & Small, 2005). Seventy percent of patients present with lymphatic spread; 50% have venous involvement at diagnosis (Coleman, 2005).

The pancreas contains two types of glands: exocrine and endocrine. Exocrine glands release enzymes into the small intestine that assist with digestion. More than 95% of the cells in the pancreas are exocrine glands and ducts (NCI, 2010).

Etiology and Risk Factors

Pancreatic cancer results from the accumulation of acquired genetic mutations (Vogelstein & Kinzler, 2004). Unlike other malignancies, pancreatic cancer involves several genetic abnormalities. One study suggested that each pancreatic cancer cell carries an average of 63 genetic mutations (Jones et al., 2005).