



Metastatic Pancreatic Cancer

Pancreatic cancer is usually not diagnosed until it is already at an advanced stage.¹ For people with advanced disease, prognosis is poor and survival rates are very low: 98 percent of patients with metastatic disease will die within five years of diagnosis, according to SEER data from 2003 – 2009.^{1,2,3}

Pancreatic Cancer by the Numbers in the United States

All stages

- Pancreatic cancer is the **4th** most common cause of cancer-related death.¹
- **More than 75 percent** of pancreatic cancer cases are diagnosed in people over the age of 60.⁴
- Adenocarcinoma, the most prevalent subtype of pancreatic cancer, accounts for **90 percent** of pancreatic cancers.⁵
- **Only approximately 26 percent of patients with pancreatic cancer survive for one year following diagnosis.**²

Metastatic disease

- **More than half** of patients are diagnosed after their cancer has spread or metastasized.²
- The median life expectancy after diagnosis with metastatic disease is approximately **3 months.**⁶
- **Less than 10 percent of patients with metastatic disease survive for one year following diagnosis.**⁴
- The 5-year survival rate for metastatic pancreatic cancer is approximately **2 percent.**²

Pancreatic Adenocarcinoma Causes and Risk Factors

The pancreas is a gland about six inches long that is located in the abdomen and is surrounded by the stomach, small intestine, liver, spleen and gallbladder. The “head” of the pancreas is near the small intestine, and the “tail” is near the spleen.⁷ The pancreas produces enzymes that aid in digestion and hormones, such as insulin, to regulate the body’s glucose or sugar levels.⁸

There are two main types of pancreatic cancer: exocrine and neuroendocrine tumors. Exocrine tumors account for 95 percent of pancreatic cancer and neuroendocrine tumors account for 4 percent of pancreatic cancer. Adenocarcinoma is a sub-type of exocrine tumors and is the most prevalent type.⁷

About 20 to 30 percent of exocrine pancreatic cancer cases are thought to be caused by cigarette smoking.⁷

Other common risk factors include the following:

- Family history of pancreatic cancer
- Personal history of pancreatitis, diabetes or obesity
- Certain genetic syndromes, including Lynch syndrome, an inherited genetic mutation more often associated with a high risk of colon cancer but that can also lead to pancreatic cancer⁷



Prognosis

Pancreatic cancer prognosis is typically described in 5-year survival rates, which are greatest (24.1 percent) for patients diagnosed with localized pancreatic cancer (Table 1).³

According to the American Cancer Society, for all stages combined, the 1-year survival rate is only 26 percent.²

Table 1: SEER Stage Distribution and 5-year Relative Survival by Stage at Diagnosis for 2003-2009¹⁰

Stage at Diagnosis	Stage Distribution (%)	5-year Relative Survival (%)
Localized (confined to primary site)	9	24.1
Regional (spread to regional lymphnodes)	27	9.0
Distant (cancer has metastasized)	53	2.0
Unknown (unstaged)	11	4.1

How is Pancreatic Cancer Treated?

Today, options for the treatment of pancreatic cancer are limited, due in part to the late stage at which it is diagnosed, low eligibility rates for resection and few treatment options.²

Current treatment options include surgery, chemotherapy, radiation therapy and targeted therapy.^{1,9} Clinical trials with investigational agents is another option for some patients.¹⁰ There are only a handful of treatments approved in the U.S. and Europe for advanced pancreatic cancer. Prior to 2013, the last U.S. Food and Drug Administration (FDA) approval for metastatic pancreatic cancer was in 2005.^{11,12}

Various single and multi-medication regimens of chemotherapy and targeted therapy are used to treat pancreatic cancer.^{1,9,10}

Treatment of metastatic disease is a key area of unmet need in pancreatic cancer.^{1,9}

What's New?

Many clinical trials are testing new treatments for pancreatic cancer that may disrupt the ability of cancer cells to form, grow and spread.^{1,9}

One new approach is to deplete the stroma—a dense, poorly vascularized mass that surrounds the cancer cells in the pancreatic tumors. Some studies suggest that the unusually tough stroma around pancreatic tumors may be nearly impenetrable to chemotherapeutic agents and prevent the immune system from launching its own attack on the cancer.¹³

Researchers continue to investigate more effective targeting and delivery systems that drive these agents to the core of the tumor.¹⁴

There are currently more than 50 treatments under development for the treatment of metastatic pancreatic cancer, but fewer than 10 are in phase III clinical trials.^{15,16}



References

- 1 American Cancer Society. Cancer Facts & Figures, 2013. <http://www.cancer.org/acs/groups/content/@epidemiologysurveillance/documents/document/acspc-036845.pdf>. Accessed August 2, 2013.
- 2 American Cancer Society. Cancer Facts & Figures, 2012. <http://www.cancer.org/acs/groups/content/@epidemiologysurveillance/documents/document/acspc-031941.pdf>. Accessed August 2, 2013.
- 3 SEER Stat Fact Sheets. Cancer of the Pancreas. <http://seer.cancer.gov/statfacts/html/pancreas.html#survival>. Accessed August 15, 2013.
- 4 Key C. Cancer of the Pancreas. In SEER Survival Monograph: Cancer Survival Among Adults: US SEER Program, 1988-2001, Patient and Tumor Characteristics. Available at http://seer.cancer.gov/publications/survival/surv_pancreas.pdf. Accessed August 2, 2013.
- 5 Sharma C, Eltawil KM, Refrew PD, Walsh MJ, Molinari M. Advances In Diagnosis, Treatment And Palliation Of Pancreatic Carcinoma: 1990-2012. *World J Gastroenterol*. 2011; 17:867-897.
- 6 Worni M, Guller U, White RR, Castleberry AW, Pietrobon R, Cerny T, Gloor B, Koeberle D. Modest Improvement in Overall Survival for Patients With Metastatic Pancreatic Cancer: A Trend Analysis Using the Surveillance, Epidemiology, and End Results Registry From 1988 to 2008. *Pancreas*. 2013. doi: 10.1097/MPA.0b013e318291fbc5.
- 7 American Cancer Society. Pancreatic Cancer. <http://www.cancer.org/acs/groups/cid/documents/webcontent/003131-pdf.pdf> Updated January 28, 2013. Accessed August 1, 2013.
- 8 National Cancer Institute. General Information About Pancreatic Cancer. <http://www.cancer.gov/cancertopics/pdg/treatment/pancreatic/Patient/page1>. Accessed July 26, 2013.
- 9 National Institutes of Health. National Cancer Institute. Pancreatic Cancer Treatment (PDQ®) Health Professional Version. <http://www.cancer.gov/cancertopics/pdg/treatment/pancreatic/HealthProfessional/AllPages>. Last Modified May 17, 2013. Accessed July 19, 2013.
- 10 National Comprehensive Cancer Network. NCCN Guidelines: Pancreatic Adenocarcinoma. Version 1.2013.
- 11 National Cancer Institute. FDA Approval for Erlotinib Hydrochloride. <http://www.cancer.gov/cancertopics/druginfo/fda-erlotinib-hydrochloride>. Last Modified July 3, 2013. Accessed July 26, 2013.
- 12 Department of Health & Human Services U.S. Food and Drug Administration. NDA 21-743/S-003. November 2, 2005.
- 13 Garber K. Stromal Depletion Goes On Trial In Pancreatic Cancer. *J Natl Cancer Inst*. 2010;102(7):448-450.
- 14 Welch SA, Moore MJ. Combination Chemotherapy In Advanced Pancreatic Cancer: Time To Raise The White Flag? *J Clin Oncol*. 2007; 25:2159-61.
- 15 Pharmaceutical Research and Manufacturers of America. Medicines in Development for Cancer. <http://www.phrma.org/sites/default/files/pdf/phrmamedicinesindevelopmentcancer2012.pdf>. 2012. Accessed August 23, 2013.
- 16 ClinicalTrials.gov. [Search results](#) for Open Phase III Studies In Metastatic Pancreatic Cancer. Accessed August, 2013.