

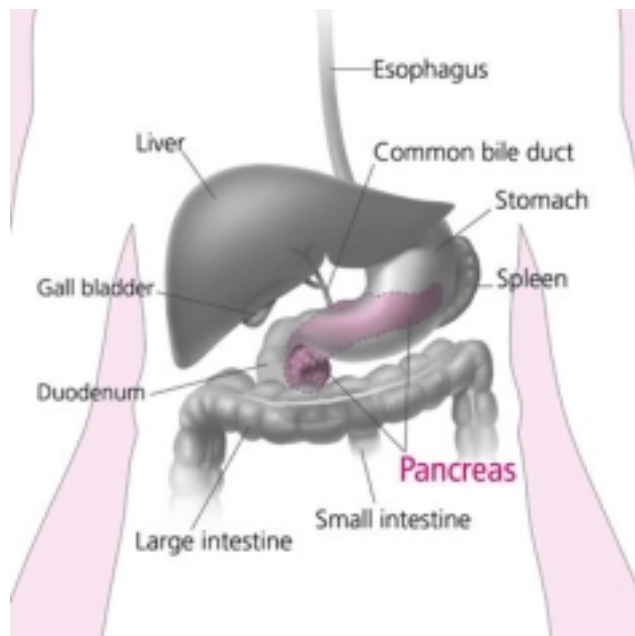
## Pancreatic Cancer in Florida (1991-1999)

Prepared by:  
Lydia Voti, M.S.  
Florida Cancer Data System  
PO Box 016960 (D4-11)  
Miami, FL 33136  
305-243-4600

### Introduction

#### About the pancreas and its functions

The pancreas is a 6-inch long gland that is shaped like a flat pear and is located deep in the abdomen between the stomach and the spine. The pancreatic gland is surrounded by the liver, the intestine and other organs. One of its most important functions is the production of insulin and other hormones. These hormones control the energy storage mechanisms in the body that come from the digestion process. The pancreas also produces enzymes that assist the digestion process. These enzymes are released to the small intestine through a system of ducts<sup>1</sup>.



#### Pancreatic cancers and risk factors

Most pancreatic cancers begin in the pancreatic ducts. A more rare type of pancreatic cancer occurs in the islet cells that make insulin and hormones<sup>1</sup>.

As with most cancers, pancreatic cancer is a disease occurring mostly in the elderly population, and more often in people over the age of 60. Males are more prone to this cancer than females and Blacks are more likely than Hispanics or Whites to be diagnosed with this cancer. Diabetics are at a higher risk for developing pancreatic cancer than non-diabetics. There are behavioral and genetic risk factors associated with the risk of developing

<sup>1</sup> Source: National Cancer Institute, <http://www.nci.nih.gov>

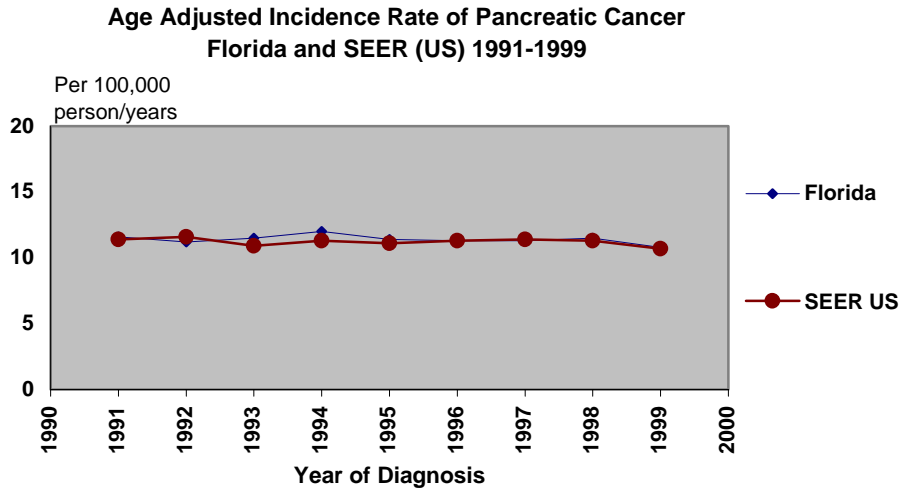
pancreatic cancer: smoking almost doubles the risk of this cancer; family history of pancreatic, ovarian or colon cancers in first-degree relatives has been linked to increased risk of developing pancreatic cancer. Anecdotal evidence suggests that chronic pancreatitis may increase the risk of pancreatic cancer. Other studies suggest that exposure to chemicals and high fat diets increase the chance of developing this cancer.

Pancreatic cancer is a rather asymptomatic disease in the early stages, or with symptoms that could be easily taken for a simple infection. This is why it is often diagnosed at later stages when more noticeable symptoms appear. This leaves little room for a good prognosis as pancreatic cancer is very difficult to treat even at earlier stages.

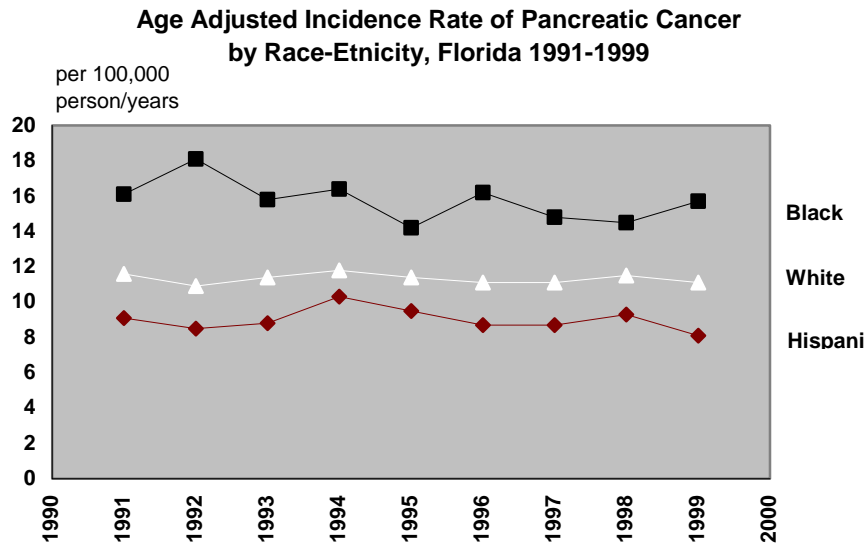
## Florida and US Trends

### Incidence

Between 1991 and 1999, an average of 2,500 cases were diagnosed and recorded by the 9 SEER<sup>2</sup> registries annually. In Florida, the annual number of new pancreatic cancers diagnosed is similar. On the average, 2,100 new cases have been diagnosed in Florida annually for the past 9 years. The age adjusted incidence rates of pancreatic cancer in Florida are similar to that of the US, as reflected by the 9 SEER registries' data.



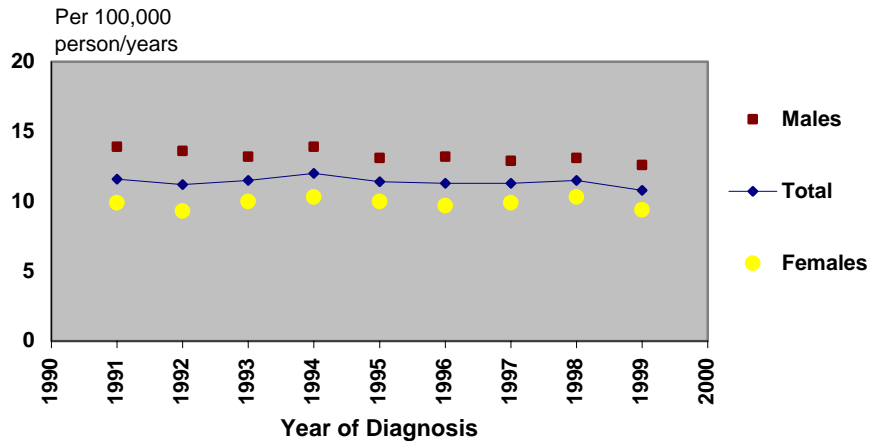
Florida's statistics confirm the documented US trends: Higher incidence rates have been recorded for Blacks compared to Whites and Hispanics. For the period 1991-1999, the age adjusted incidence rates for Blacks ranged between 12.1 and 18.1 cases per 100,000, and from 8 to 11.6 per 100,000 for Whites and Hispanics.



In terms of gender differences, a similar and consistent trend is observed over time, with males having higher incidence rates than females.

<sup>2</sup> SEER: The Surveillance, Epidemiology, and End Results (SEER) Program of the [National Cancer Institute](http://www.nationalcancerinstitute.gov) is considered a source of information on cancer incidence and survival in the United States. It currently consists of 11 registries but some public use data sets available for statistics are based on data from 9 registries.

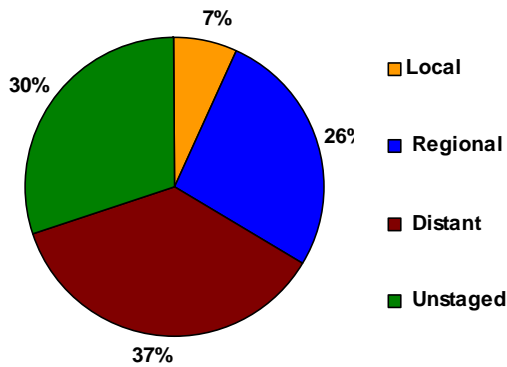
### Age Adjusted Incidence Rate of Pancreatic Cancer by Sex, Florida 1991-1999



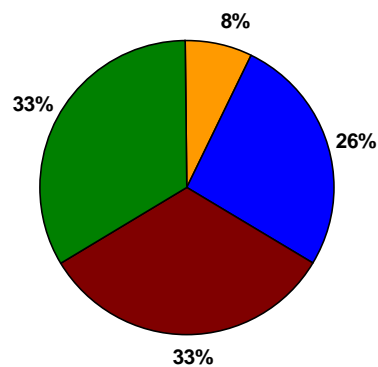
There is a high percentage of unstaged pancreatic cancers (30% for Men and 33% for Women). About half of the unstaged cases are based on data only collected from death certificates that contain no staging information. The rest of the unstaged pancreatic cancers are reported by hospitals and this figure is much higher than the percentage of unstaged disease reported by hospitals for other cancer sites.

An issue to consider with pancreatic cancer is that the disease is often far advanced by the time symptoms occur (and the diagnosis is established) and also that pancreatic cancers are very often diagnosed clinically after serious life-threatening symptoms surface. Therefore physicians may try to treat these symptoms first while they are trying to establish a definitive diagnosis. Also, on some occasions, clinicians have to perform life-saving procedures such as bypass surgery at diagnosis so that the system can function for a while. It is therefore possible that by the time a diagnosis has been confirmed, the person's health is either already severely compromised and no further stage related diagnostic workup is undertaken, or that due to the nature of the bypass surgery there isn't much staging information in the operative report. Another plausible explanation for the high percentage of unstaged disease is that –unlike other types of cancer- the outlook for both early and late stage pancreatic cancers continues to be rather dismal, therefore extensive diagnostic workup and treatment are not pursued and often only palliative therapy is recommended.

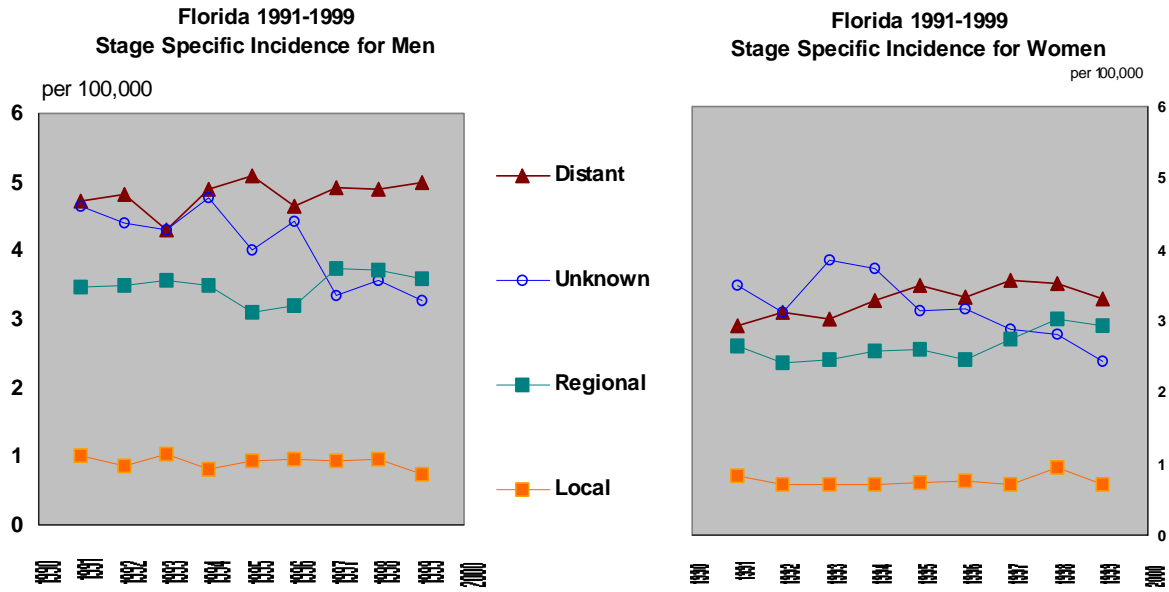
Stage Distribution for Pancreatic Cancers Men- Florida 1991-1999



Stage Distribution for Pancreatic Cancers Women- Florida 1991-1999

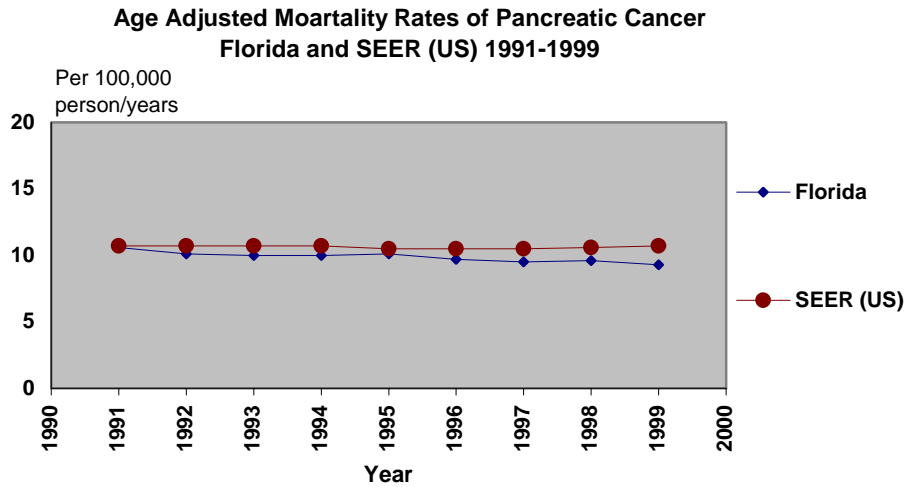


The incidence rates of pancreatic cancer diagnosed at an early stage are stable over time and there is a slight increase in the rates of regional and distant stage disease. Interestingly enough, the incidence rates for males and females are very close for localized (early stage) disease, whereas significant differences are observed in the incidence rates of pancreatic cancers of advanced stage (regional and distant). Females have significantly lower rates of advanced stage disease than males.

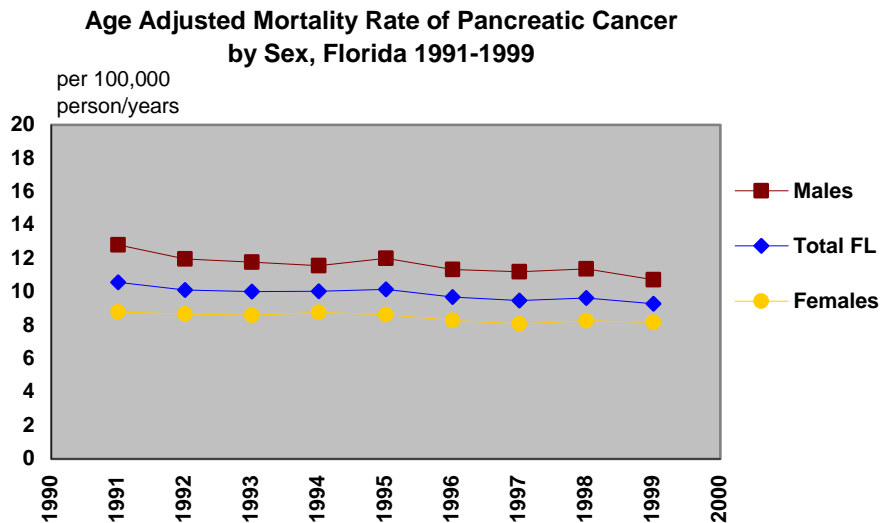


## Mortality

Pancreatic cancer is a highly lethal disease with the poorest likelihood of survival among all cancers. It accounts for 5% of all cancer deaths. It is the 5<sup>th</sup> leading cause of cancer deaths in the US<sup>3</sup>, with a mortality rate of 10.7 deaths per 100,000 (person/years) in 1999 and the 5<sup>th</sup> leading cause of cancer deaths in Florida, with a mortality rate of 9.3 deaths per 100,000 person years. In 1999, 1,973 deaths were recorded in Florida with pancreatic cancer as the underlying cause<sup>3</sup>. And on the average, for the period 1991-1999, pancreatic cancer has been the underlying cause of death for 1,850 Floridians annually.

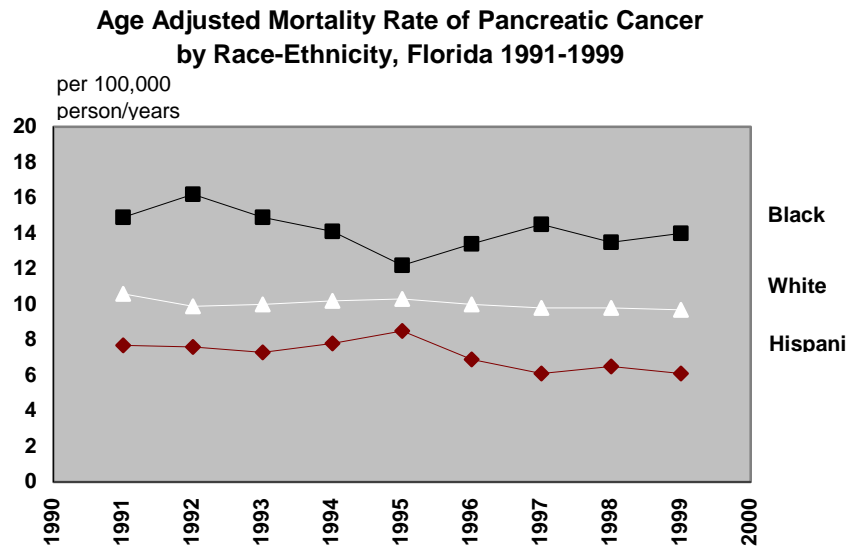


As with the incidence rates for males, the mortality rates of males are higher than those of females as well.



<sup>3</sup> Sources: SEER (<http://seer.cancer.gov/canques>)  
1999 Florida Annual Cancer Report, Florida Department of Health  
Office of Vital Statistics, Florida Department of Health

Similarly, Blacks have higher mortality rates than Whites or Hispanics, with the gap closing slightly in 1995, yet remaining significantly different after that. There is also a small decline in the mortality rates of pancreatic cancer in the Hispanic population.



### Treatment

Pancreatic cancer is very hard to control and cure with current treatments, unless diagnosed at an early stage. Patients are often referred to clinical trials and advised to choose palliative care for improving their quality of life. The National Cancer Institute (NCI) has several publications with information on clinical trials, offered to the public through the Cancer Information System (1-800-4-CANCER). Additional information on treatment and relevant publications can be found on the NCI web site (<http://cancer.gov/publications> )