



Pancreatic Cancer and Current Therapy

Pancreatic cancer is one of the most lethal of all human cancers. Because incident and mortality for pancreatic cancer are nearly identical, either measure can be used to study the frequency of this neoplasm. Pancreatic cancer is worldwide responsible for 227,000 deaths per year, and is the eighth most common cause of death from cancer in both sexes combined, a relative position higher than for incidence (thirteenth) because of the very poor prognosis (the M/I ratio is 98%). The sex ratio is close to one. Most cases and deaths (61%) occur in developed countries, where incidence and mortality rates are between 7 and 9 per 100,000 in men and 4.5 and 6 per 100,000 in women, with lower rates in developing countries.

Early detection of pancreatic cancer is difficult, and most patients have metastatic or unresectable disease at the time of diagnosis. Patients with unresectable pancreatic cancer have a median survival of only 6 months, and 98% of patients with pancreatic cancer die from this disease.

Single agent gemcitabine is currently the standard of care for the treatment of advanced or metastatic adenocarcinoma of the pancreas. However, treatment with this agent results in only moderate improvement in survival. Therefore, several clinical trials of other anticancer agents and combination regimens have been, and continue to be, studied. The National Cancer Institute of Canada Clinical Trials Group (NCIC-CTG) recently reported the results of an international clinical trial testing the benefit of the addition of erlotinib (Tarceva™) to gemcitabine compared to gemcitabine alone for the first-line management of locally advanced/metastatic pancreatic cancer. This study demonstrated statistically significant improvement in median overall survival favoring the erlotinib arm (6.37 months for the combination vs. 5.91 months for single agent gemcitabine); the 1-year survival also favored the combination (24% vs 17%). On November 2, 2005, FDA approved Tarceva in combination with gemcitabine for first-line treatment of patients with locally advanced, unresectable or metastatic pancreatic cancer. Several other agents failed to influence overall survival when added to gemcitabine in similar randomized clinical trials; e.g. oxalyplatin and bevacizumab. Given the very modest clinical benefit of erlotinib and the failure of other tested agents to enhance survival when added to gemcitabine in this population, there remains substantial unmet medical need for better therapies.