Effect of Different Therapy on Survival in Pancreatic Cancer: A Propensity Score Analysis of the Surveillance Epidemiology and End Results Data

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Objectives: This study would examine the mortality for pancreatic cancer patients treated with different therapy.

Methods: Surveillance Epidemiology and End Results (SEER) data were used to identify patients diagnosed with adenocarcinoma of the pancreas from 2004 to 2014. The differences were examined in mortality among patients underwent pancreatectomy alone, and those who had surgery adjuvant radiotherapy. Kaplan-Meier and multivariable Cox proportional hazards analyses using propensity score stratification were conducted to determine the effect of different treatments on overall survival.

Results: A total of 5673 patients were included with 3717 taking pancreatectomy and 1956 taking surgery adjuvant radiotherapy. After the propensity score stratification, the median overall survival time for the first and second stratification was not statistically significant, with p=0.667 and 0.068 respectively. But it's statistically significant for the third, fourth and fifth stratification, with p=0.012, 0.0477 and 0.0004 respectively. Fourth and fifth stratification suggested the surgery alone was better than surgery

adjuvant radiotherapy. But the third one gave us the opposite result.

Conclusions: We could not conclude the survival benefit of surgery adjuvant radiotherapy was better than surgery alone in patients with pancreatic cancer from the data. So the choice of therapy for these patients may be dependent more on their characteristics.