Low adiponcetin associated with increased pancreatic cancer risk

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Low prediagnostic levels of circulating adiponectin were associated with an increased risk of pancreatic cancer, according to a study published December 14 in the *Journal of the National Cancer Institute*.

Pancreatic cancer is the fourth leading cause of cancer death in the U.S., but its etiology remains unclear. Adiponectin, a hormone secreted from fat cells, has insulin-sensitizing and anti-inflammatory properties. Low adiponectin plasma levels are associated with the insulin resistance that manifests in obesity and diabetes mellitus, both of which are risk factors for pancreatic cancer.

In order to determine if prediagnostic plasma levels of adiponectin were linked to an increased risk of pancreatic cancer, Ying Bao, M.D., Sc.D., Channing Laboratory, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, and colleagues, pooled the data from five prospective U.S. cohort studies, and matched 468 pancreatic cancer case subjects with 1,080 healthy control subjects by cohort, year of birth, smoking status, fasting status, and month of blood draw. They assessed the association between adiponectin and pancreatic cancer risk with conditional logistic regression.

The researchers found a statistically significant inverse association between prediagnostic plasma adiponectin levels and the risk of pancreatic cancer in the five prospective cohorts. "Our data provide additional evidence for a biological link between obesity, insulin resistance, and pancreatic cancer risk and also suggest an independent

role of adiponectin in the development of pancreatic cancer," the authors write.

In an accompanying editorial, Jianliang Zhang, Ph.D., Associate Professor of Oncology and Steven N. Hochwald, M.D., Department of Surgical Oncology, both of the Roswell Park Cancer Institute, write that the study establishes a link between adiponectin levels and pancreatic cancer risk that suggests that metabolism contributes to the pathophysiology of pancreatic cancer. "Early detection by the assessment of adiponectin has the potential to improve the survival rates of pancreatic tumor patients," the authors write. "It is also inviting to speculate that therapeutic interventions to increase the levels of circulating adiponectin may prevent the development of pancreatic cancer and/or improve the survival of patients with malignancy."

Provided by Journal of the National Cancer Institute