

Diabetes may be an early manifestation of pancreatic cancer

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A new study in the *Journal of the National Cancer Institute*, published by Oxford University Press, indicates that recent-onset type 2 diabetes may be early expression of pancreatic cancer. Diabetes was associated with a more than twofold higher risk of pancreatic cancer in African Americans and Latinos, but recent-onset diabetes was associated with a 2.3-fold greater increase in risk of pancreatic cancer than long-standing diabetes.

Pancreatic cancer is one of the most fatal cancers, with a five-year survival rate of only 8 percent. This is because the vast majority of [pancreatic cancer](#) patients (some 80 percent of them) are diagnosed at a late stage. Identification of high-risk people and ability to detect [pancreatic](#) cancer earlier would likely improve patient outcomes.

Diabetes has been consistently associated with pancreatic cancer in previous studies, with a twofold higher risk of developing pancreatic cancer among diabetes patients. Diabetes has been proposed to be both a risk factor for and a consequence of pancreatic cancer. The prevalence of diabetes among pancreatic cancer patients is unusually high relative to other cancers.

The majority of the diabetes patients with pancreatic cancer are diagnosed with diabetes less than three years before the cancer diagnosis. Among pancreatic cancer patients undergoing pancreaticoduodenectomies (the surgical operation often used to try to remove pancreatic tumors), over half of patients with recent-onset diabetes have no diabetes postoperatively. Researchers have observed no effect in those who have had diabetes for more than three years.

Here researchers examined the association between recent-onset diabetes and pancreatic cancer in a prospective study of African Americans and Latinos, two minority populations with high diabetes risk.

Questionnaires, Medicare data, and California hospital discharge files were used to identify new diabetes diagnoses. A total of 15, 833 (32.3 percent) participants developed diabetes between 1993 and 2013. A total of 408 incident pancreatic cancer cases were identified during follow-up.

During an average follow-up of 14 years, among those with diabetes, 128 participants developed pancreatic cancer. Among participants without diabetes, 280 participants developed pancreatic cancer. In pancreatic cancer with diabetes, 52.3 percent of cases developed diabetes in the 36 months preceding the pancreatic cancer diagnosis.

Recent-onset diabetes was strikingly higher among pancreatic cancer cases (16.4 percent) compared with those with colorectal (6.7 percent), breast (5.3 percent), and prostate (5.5 percent) cancer.

Diabetes was associated with an approximately twofold increased risk of pancreatic cancer. When stratifying by disease duration, people with recent-onset diabetes had the highest risk of developing pancreatic cancer. Importantly, the researchers demonstrated that the association of recent-onset diabetes with pancreatic cancer incidence was evident in African Americans and Latinos, two understudied minority populations with high risk of diabetes but different pancreatic cancer rates.

The findings support the hypothesis that recent-onset diabetes in pancreatic cancer is a manifestation of developing pancreatic cancer. The work suggests that patients with recent-onset diabetes who go on to develop pancreatic cancer represent a high-risk population of [patients](#) who can be studied for additional risk predictors and may be targeted for development of the tests that are needed for earlier diagnosis.

"This striking relationship between recent-onset diabetes is unique to pancreatic cancer, and is not seen in breast, prostate and colorectal cancer in

the cohort," said one of the paper's authors, Wendy Setiawan. "Our findings strongly support the hypothesis that recent-onset diabetes is a consequence of pancreatic cancer and that long-standing diabetes is a risk factor for this cancer. Importantly, here we show that the association of recent-onset [diabetes](#) with pancreatic [cancer](#) is observed in African Americans and Latinos, two understudied minority populations."

More information: "Pancreatic Cancer Following Incident Diabetes in African Americans and Latinos: The Multiethnic Cohort" *Journal Of The National Cancer Institute* (2018). [DOI: 10.1093/jnci/djy090](https://doi.org/10.1093/jnci/djy090)

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