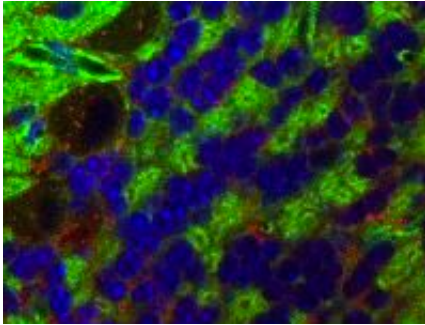


Metformin use may not improve pancreatic cancer survival

22 April 2015



Metformin use did not improve survival of patients with pancreatic ductal adenocarcinoma (PDAC) in a retrospective cohort study, according to data presented at the AACR Annual Meeting 2015, April 18-22.

"The diabetes drug metformin is being used in some cancer treatment trials based on epidemiologic studies that have reported that use of metformin reduces the risk of death from cancer," said Roongruedee Chaiteerakij, MD, PhD, of the Division of Gastroenterology and Hepatology at Mayo Clinic Cancer Center in Rochester, Minnesota.

"This study highlights the importance of appropriate design of retrospective studies and the necessity of conducting prospective studies with solid rationale for determining the effect of diabetes drugs on cancer risk or death."

According to Chaiteerakij, several epidemiological studies based on retrospective data have reported that metformin is associated with longer [survival](#) from different cancers, including pancreatic cancer.

Cancer clinical trials have been opened that incorporate metformin in a treatment arm, in part based on these studies, but whether metformin

has a beneficial effect on improving survival of [cancer patients](#) remains unproven.

In this [retrospective study](#) to comprehensively assess metformin use and survival, Chaiteerakij and colleagues used data from 1,360 patients with PDAC who had data available from the Mayo Clinic Specialised Programmes of Research Excellence (SPORE) in [pancreatic cancer](#) database.

Patients were categorised by metformin use into five groups depending on when they used metformin, from those who had never used metformin to those who started taking metformin more than 30 days after PDAC diagnosis.

The median survival for patients who did not use metformin was 308 days, compared with 292 days for patients with various metformin exposures, which was not statistically different.

The longest survival, for 818 days, occurred in patients who started taking metformin more than 30 days after PDAC diagnosis.

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"These patients already survived more than 30 days, suggesting that there is an inherent survival bias in this group of patients," Chaiteerakij said. "After accounting for these unintended biases, the benefit of metformin was not confirmed in our study."

When the researchers looked at only the 413 patients in the study with resectable disease, they did find a trend toward improved survival among [metformin](#) users, but it was not statistically significant.

"Studies of medication exposure and cancer survival warrant very careful and detailed data collection, which is not always possible in a retrospective study design," Chaiteerakij said.

"Researchers should exercise caution when

initiating clinical trials based on retrospective epidemiologic studies."

Provided by American Association for Cancer Research

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