

Metformin, one of the most widely used diabetes drugs, may offer patients the added benefit of lowering their odds for pancreatic cancer by 62%, a new study shows.

But the study had a downside: other common treatments, including the use of insulin or insulin-releasing medications such as sulfonylureas, seemed to boost diabetics' risk for the deadly malignancy.

"We have been long interested in the association between diabetes and pancreatic cancer," explained study lead author Donghui Li, a professor in the department of gastrointestinal medical oncology at the University of Texas M.D. Anderson Cancer Center in Houston. "It's a very complicated association because pancreatic cancer can cause diabetes, while on the other hand diabetics have a higher risk for pancreatic cancer. So it's been quite controversial, and the question is, 'What can we do to reduce this risk?' "

"So here we found that if people use metformin they have a 62% lower risk for pancreatic cancer than those who have diabetes but never used metformin," Li said. "And that's quite a dramatic effect. And so far it's the only thing that we've seen that can reduce the risk for pancreatic cancer so much."

Metformin is an extremely popular oral medication commonly prescribed for patients coping with Type 2 diabetes. It goes by its generic name as well as brand names such as Glucophage, Riomet, Fortamet, Glumetza, Obimet, Dianben and Diabex.

Although there are several other treatment options available, the American Diabetes Association recommends metformin as a first-line treatment for Type 2 diabetes.

The current finding is based on an analysis of 973 pancreatic cancer patients (259 of whom were diabetic) and 863 non-cancer patients (109 of whom were diabetic), all of whom received care at M.D. Anderson between 2004 and 2008.

The researchers found that diabetics who had ever taken metformin as a treatment for their condition cut their risk for pancreatic cancer by 60%, compared to those who had never taken the drug. The risk reduction was particularly apparent among diabetics who had taken metformin for five years or more, they noted.

Being a smoker, overweight or obese, or having glycemic control issues did not appear to impact the protective relationship between metformin and pancreatic cancer risk, Li and her team observed.

On the other hand, the researchers found that diabetic patients who had taken insulin as a treatment were nearly five times more prone to developing pancreatic cancer than patients who

had never taken insulin. Similarly, those who took insulin secretagogues (insulin-releasing drugs such as sulfonylureas or glinides) had more than double the risk of pancreatic cancer than those who had not.

"Because the individuals we looked at who used metformin were comparable in most ways with those who did not, we have confidence in terms of the influential role metformin specifically had on reducing pancreatic risk," Li noted. "And because there is already a general recommendation to use this drug, our finding adds even more of an incentive. Because this drug appears to have a tremendous health impact, and because we have so few tools to use to fight against pancreatic cancer at this point," she added.

"Of course our observation needs to be confirmed with further research with other patient pools," she cautioned. "But hopefully while we're doing that we can find some biomarker to identify higher risk for pancreatic cancer in general among diabetics."

For his part, Dr. Len Lichtenfeld, deputy chief medical officer of the American Cancer Society in Atlanta, described the findings as "interesting" and "significant." "It does need to be looked at in a larger population, as the authors note," he said. "But meanwhile I think there are two things here worth discussing. One is obviously that there seems to be a reduction in pancreatic cancer among metformin users. But the other issue is the suggestion -- which is not a finding, but a suggestion -- that people on insulin actually have an increased risk for pancreatic cancer."

"Now on this second point it has to be said that people on insulin are generally people who are also overweight and obese," Lichtenfeld stressed. "And that in and of itself is a risk factor for pancreatic cancer. So there are a lot of other interactions in there that could possibly explain the findings. And they need to be explored."

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