

Diabetes drugs taken by over 15 million Americans raises risk of bladder cancer

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A popular class of diabetes drugs increases patients' risk of bladder cancer, according to a new study published online this month in the *Journal of the National Cancer Institute*. Researchers from the Perelman School of Medicine at the University of Pennsylvania found that patients taking thiazolidinedione (TZDs) drugs – which account for up to 20 percent of the drugs prescribed to diabetics in the United States -- are two to three times more likely to develop bladder cancer than those who took a sulfonylurea drug, another common class of medications for diabetes.

The authors say the findings are especially important since diabetic [patients](#) are known to already be at a slightly increased risk of this type of cancer as compared to the generation population, in which about 30 in 100,000 people develop bladder cancer. Among [diabetes patients](#) overall, the incidence of this cancer is typically about 40 out of 100,000.

The authors of the new study analyzed 60,000 Type 2 diabetes patients from the Health Improvement Network (THIN) database in the United Kingdom. They found that patients treated with the TZD drugs pioglitazone (Actos) or rosiglitazone (Avandia) for five or more years had a two-to-three-fold increase in risk of developing bladder cancer when compared to those who took sulfonylurea drugs. Among patients taking TZDs for that length of time, the team's analysis indicates that 170 patients per 100,000 would be expected to develop the disease. About 60 in 100,000 of those who take sulfonylurea drugs – such as glipizide (Glucotrol) -- would be expected to develop bladder cancer.

"Diabetes is one the most common chronic diseases worldwide, affecting 285 million people. There are many factors clinicians must weigh in deciding which [drug](#) to use to control a patient's diabetes, and these new data provide important information to include in that decision-making process," said the study's lead author, Ronac Mamtani, MD, an instructor in the division of Hematology-Oncology in Penn's Abramson Cancer Center. "Our study shows that doctors who care for patients with diabetes should be very aware of any bladder-related symptoms patients might be having, like blood in the urine, and take steps to further evaluate those issues."

Though most patients in the United States no longer take Avandia since it was linked to severe cardiovascular problems, Actos is the ninth most commonly prescribed drug in the nation, accounting for some 15 million prescriptions each year. The drug is a common choice when Type 2 diabetes patients' illnesses can no longer be controlled with the first-line diabetes drug Metformin.

Based on previous data examining safety risks among patients taking Actos, the FDA has already warned that it may be associated with a risk of bladder cancer, and France and Germany have removed the drug from their markets. The new findings add to mounting evidence against the entire class of TZDs, as one of the first studies examining this type of risk among people taking both types of TZDs and among those taking sulfonylurea drugs.

"The risk does seem to be common among both drugs in the TZD class, and the fact that we have compared [bladder cancer](#) risk among patients taking each of those drugs provides essential information, because a safety warning on a drug is only useful to a doctor when they have knowledge of the same risks for an alternative drug," Mamtani says. "We believe our study will help doctors and their patients weigh the potential benefits and risks when selecting between different [diabetes](#)

medication."

Provided by University of Pennsylvania School of Medicine

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