

Examination of use of diabetes drug pioglitazone and risk of bladder cancer

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Although some previous studies have suggested an increased risk of bladder cancer with use of the diabetes drug pioglitazone, analyses that included nearly 200,000 patients found no statistically significant increased risk, however a small increased risk could not be excluded, according to a study in the July 21 issue of *JAMA*. Additional analyses with another large group found that use of pioglitazone was associated with an increase in the risk of prostate and pancreatic cancer, although further investigation is needed to assess whether the associations are causal or due to other factors.

Assiamira Ferrara, M.D., Ph.D., of Kaiser Permanente Northern California, Oakland, and colleagues studied with several groups of persons with diabetes: a [bladder cancer](#) cohort that followed 193,099 persons (40 years or older in 1997-2002) until December 2012; 464 case patients and 464 matched controls were surveyed about additional confounders (factors that can influence outcomes that may improperly skew the results); and a cohort analysis of 10 additional cancers included 236,507 persons (40 years or older in 1997-2005) and followed until June 2012. The additional cancers were prostate, female breast, lung/bronchus, endometrial, colon, non-Hodgkin lymphoma, pancreas, kidney/renal pelvis, rectum, and melanoma. All cohorts were from Kaiser Permanente Northern California.

Among the persons in the bladder cancer cohort, 34,181 (18 percent) received [pioglitazone](#) (median duration, 2.8 years) and 1,261 had incident bladder cancer. Ever use of pioglitazone was not associated with

bladder cancer risk. Results were similar in case-control analyses (pioglitazone use: 19.6 percent among case patients and 17.5 percent among controls).

In adjusted analyses, there was no association with 8 of the 10 additional cancers; ever use of pioglitazone was associated with increased risk of prostate cancer and pancreatic cancer. No clear patterns of risk for any cancer were observed for time since initiation, duration, or dose.

"These studies were conducted to address safety concerns related to the risk of cancer after treatment with pioglitazone," the authors write.

"There was no statistically significant increased risk of bladder cancer associated with pioglitazone use. However, a small increased risk, as previously observed, could not be excluded. The increased prostate and [pancreatic cancer](#) risks associated with ever use of pioglitazone merit further investigation to assess whether the observed associations are causal or due to chance, residual confounding, or reverse causality."

More information: *JAMA* [DOI: 10.1001/jama.2015.7996](https://doi.org/10.1001/jama.2015.7996)

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