

LETTER TO EDITOR

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## Need to Increase Awareness Among Urologists Regarding the Possible Association Between Pioglitazone and Bladder Cancer

Sundaramoorthy Chandru<sup>1</sup>, Vijay Venkatraman Janarthanan<sup>2</sup> and Viswanathan Mohan<sup>1</sup>

<sup>1</sup>Madras Diabetes Research Foundation and Dr. Mohan's Diabetes Specialities Centre, Chennai, India.

<sup>2</sup>Pharmacovigilance Physician, Oviya MedSafe, Coimbatore, India. Corresponding author email: [drmohans@diabetes.ind.in](mailto:drmohans@diabetes.ind.in)

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## Introduction

The incidence of most cancers is increasing in India. With respect to bladder cancer, there has been a steady increase in the number of bladder cancers diagnosed per year, according to the ICMR Cancer Atlas.<sup>1</sup> Our recent interest in bladder cancers, as diabetologists, stems from the fact that use of the anti-diabetic drug pioglitazone has been linked to bladder cancer.<sup>2</sup> This has led to the discontinuation of pioglitazone

**Table 1.** Answers provided by the urologists: responses to bladder cancer questionnaire by urologists.

S. no.	Questions	No. of urologists	Percentage
1.	How many cases of bladder cancer do you see every year?		
	<5	9	12.7
	6 to 10	28	39.4
	11 to 20	12	16.9
	>20	22	31.0
2.	Type of bladder cancer seen		
	Transitional cell carcinoma		79.7
	Squamous cell carcinoma		13.5
	Adeno carcinoma		4.1
	Others		2.7
3.	Have you observed any appreciable increase in the number of bladder cancers in your practice?		
	Yes	30	42.2
	No	34	47.9
	Don't know	7	9.9
4.	Do you see bladder cancer more frequently in those with diabetes?		
	Yes	8	11.3
	No	35	49.3
	Don't know	28	39.4
5.	Have you seen any link between Pioglitazone use and bladder cancer?		
	Yes	3	4.2
	No	22	31.0
	Don't know	46	64.8
6.	Have you heard of any other drugs used for any other condition that is related to bladder cancer?		
	Yes	27	38.0
	No	29	40.9
	Don't know	15	21.1
7.	Are there any other obvious etiological factors that you know which could explain increase in bladder cancer?		
	Yes	47	66.2
	No	13	18.3
	Don't know	11	15.5

in France and Germany<sup>3</sup> and the US-FDA has also issued warnings regarding the use of pioglitazone.<sup>4</sup> A large study from the UK showed that there was an 83% increase in bladder cancer among those who used pioglitazone.<sup>5</sup> Another recent study from the United States also confirmed that pioglitazone was associated with bladder cancer.<sup>6</sup> In order to study whether urologists are aware of this association, we conducted a study using a questionnaire on bladder cancer, which was sent to 200 urologists in South India using an address book of their association. Seventy-one urologists responded (35.5%) and sent back the questionnaires duly filled in.

## Results

From Table 1, it can be seen that 22 urologists (31%) reported that they were seeing more than 20 cases of bladder cancer per year. The most common bladder cancer in practice was transitional cell carcinoma, which was seen in 79.7% of patients, followed by squamous cell carcinoma (13.5%) and adenocarcinoma (4.1%). Over 40% of urologists felt that there was an increase in bladder cancer cases. About 12% of urologists felt that bladder cancers were more common among people with diabetes, but only 3 (4.2%) were aware that there was a link between pioglitazone use and bladder cancer. Two of these three urologists worked in major teaching institutions. 38% felt that there were other drugs which were related to bladder cancer. Almost 60% of urologists reported that the use of certain dyes was related to bladder cancer.

## Conclusion

This short survey shows that the need for increasing awareness of the possible link between pioglitazone and bladder cancer in India among urologists and other doctors such as physicians, diabetologists, oncologists. It also calls for increased pharmacovigilance in India on this subject.<sup>7</sup> We propose this could be best done by performing retrospective studies using the medical records of biopsy-proven bladder cancer patients. We also propose that treating doctors should tell their patients on pioglitazone therapy about the possible risk of bladder cancers, if pioglitazone treatment cannot be discontinued for any reason.



## Author Contributions

Conceived and designed the experiments: SC, VM. Analysed the data: SC, VM. Wrote the first draft of the manuscript: SC, VM. Contributed to the writing of the manuscript: SC, VVJ, VM. Agree with manuscript results and conclusions: SC, VVJ, VM. Jointly developed the structure and arguments for the paper: SC, VVJ, VM. Made critical revisions and approved final version: SC, VVJ, VM. All authors reviewed and approved of the final manuscript.

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## Disclosures and Ethics

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