



The Authors' Reply

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Reply to the Commentary on “Seasonal Variation of Drug Prescription Rate for Overactive Bladder in Men Based on National Health Insurance Claims Data, 2012–2016”

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To the editor,

We appreciate receiving these comments on our research. We read the opinions of the reader with great interest. One reader commented that the drug prescription pattern might be different between the northern and southern regions because of the temperature difference between these regions. This is a very reasonable opinion. Indeed, Yoshimura et al. [1] performed a study on this topic in Japan, which was conducted in 3 towns that included Tobetsu that was located at a higher latitude (43° N), Kumiyaama at a middle latitude (35° N), and Sashiki at a lower latitude (26° N). They found that even though the overactive bladder (OAB) symptoms differed significantly between summer and winter, such a difference was more pronounced in the areas at relatively lower latitudes but not in the areas at higher latitudes. We believe that this result was observed due to the existence of changes in the climate depending on the latitude. However, Korea, along with all of its islands, lies between the latitudes 33° and 39° N, and the changes in the climate in this region according to the latitudes are not clear. Therefore, even if there is a difference in latitude, it is estimated that the relationship between season and OAB symptoms may be similar in Korea. However, this is just an inference. Therefore, we agree that it is necessary to check whether there is a change in the drug prescription pattern according to the regional characteristics.

In addition, this reader mentioned that it would have been better if a history of benign prostatic hypertrophy (BPH) or its

drug history were also investigated. We agree with this opinion. BPH is the main cause of lower urinary tract symptoms in men. In our previous study, cold weather worsened the lower urinary tract symptoms in BPH patients [2]. In fact, the number of patients visiting the hospital was higher in winter than in summer in the BPH/LUTS patient-based dataset of 5 years (2008–2012) according to the National Health Insurance records in Korea [3]. Unfortunately, a history of BPH and the drug prescription for this condition were not investigated because we focused on the association between the seasonal variation and the OAB drug prescription rate. In the present study, the OAB drug prescription rate was found to be higher in cold weather, and this persisted in the subgroup analysis by age groups. This suggests that OAB symptoms may be associated with the seasonal variation in young men without BPH, as well as in old men with BPH. However, this is only a conjecture, and further research is needed to determine the exact correlation. Therefore, we agree that a history of BPH and its prescribed medication should be investigated in future studies. We would like to express our gratitude for this reader's comments that can supplement our research, and we will reflect on these opinions when conducting further research.

• **Conflict of Interest:** No potential conflict of interest relevant to this article was reported.

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