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Status of Diabetic Neuropathy in Korea: A National Health Insurance Service-National Sample Cohort Analysis (2006 to 2015) (*Diabetes Metab J* 2021;45:115-9)

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We appreciate the interest and comments of Professor Tímea Csákvári and Imre Boncz et al. on our study, "Status of diabetic neuropathy in Korea: a National Health Insurance Service-National Sample Cohort Analysis (2006 to 2015)," which was published in *Diabetes and Metabolism Journal* [1].

In our study, we investigated prevalence of diabetic neuropathy (DN), patient characteris-tics, and pharmacological treatments using a National Health Insurance Service-National Sample Cohort (NHIS-NSC). DN was defined using diagnostic codes or medications prescribed by clinicians rather than clinical diagnostic criteria and neurologic examinations. In your studies, data were derived from the database of the National Health Insurance Fund Administration (NHIFA) 2018, the sole health insurance provider of Hungary [2,3]. This database is different from ours.

In your comments, International Classification of Diseases (ICD) codes of DN can be used for neurological complications (e.g., G73.0 or E10.7–E14.7, E10.8–E14.8). However, in our cohort, DN patients were included based on ICD-10 codes (E10.4–E14.4, G59.0, G63.2, G99.0) or history of DN management drug plus glucose lowering agent to exclude duplication. Therefore, our study population covered almost all DN complications patients, unlike your study population, which included only G63.20 and E11.4 ICD-10 codes. This suggests quite different study populations [2,3].

First, DN prevalence rate was different between our study and yours. Previously, we had reported a 33.5% prevalence rate of diabetic peripheral neuropathy in the Korean population in a nationwide hospital-based multicenter study conducted by the Diabetic Neuropathy Study Group of the Korean Diabetes Association [4]. Discrepancy from your prevalence rate probably is due to difference of study populations, lack of standard diagnostic criteria, and use of different diagnostic codes. Therefore, our current study prevalence rate of DN might had been underestimated compared to previous studies. However, our current prevalence rate was based on real-world data.

The second difference between studies was prescription rate of management drugs for DN patients. We defined the prescription rate for DN based on a routine clinical care setting using our insurance coverage, which limited us from directly

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comparing the prescription rates between two countries. Therefore, we recommend that you analyze your exact DN management drug prescription rate and compare to our data.

The third difference is that in prevalence rates for diabetic microvascular complication.

Diabetes fact sheet in Korea [5] showed higher prevalence rates for diabetic microvascular diseases such as DN, diabetic retinopathy, and diabetic nephropathy compared to your nationwide data. We do not know the exact causes of this difference between Korea and Hungry. If we have a chance to analyze the two nations' medical insurance system including coding and claiming, we can find the difference factor.

We would like to thank Professor Tímea Csákvári again for your comprehensive review and comments on our study. We fully agreed that prevention of DN, adequate management, and real-world health insurance claims data can contribute significantly to efforts aimed at lowering the economic and societal burden of DN.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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