

# Smoking Behavior Change and the Risk of Heart Failure in Patients With Type 2 Diabetes

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# Smoking Behavior Change and the Risk of Heart Failure in Patients With Type 2 Diabetes

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## Abstract

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## Original Manuscript

**Type of paper: Letter to the Editor****Smoking Behavior Change and the Risk of Heart Failure in Patients With Type 2 Diabetes**Jana Malinovská<sup>1</sup>, Juraj Michalec<sup>1</sup>, Jan Brož<sup>1</sup>

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**Keywords:** type 2 diabetes; smoking, heart failure

Dear Editor,

We read with great interest the article by Yoo et al [1], “Smoking Behavior Change and the Risk of Heart Failure in Patients With Type 2 Diabetes: Nationwide Retrospective Cohort Study,” published in this journal.

The study aimed to examine the association between smoking behavior change and the risk of heart failure (HF) among patients with type 2 diabetes. Smoking behavior changes were assessed at two consecutive health screenings between 2009 and 2012 and patients were followed up until the end of 2018 for the incident HF. The authors concluded that smoking cessation was associated with lower risks of HF, whereas increasing the level of smoking was associated with higher risks of HF compared to those who sustained the level of smoking. Reducing the level of smoking did not lead to a decreased risk of HF.

We applaud the authors for this valuable study but have several remarks that we feel would benefit the article's readership. The authors state that the definition of current smokers was according to the World Health Organization; however, from the reference the authors cite, it is not clear what definition was used for the study, as the reference is concerned with thyroid cancer screening in Korea [2]. It would be beneficial to understand the exact definition of current smokers and which

tobacco and nicotine products were considered for this analysis.

Secondly, as only smoking behavior changes at two consecutive health screenings, it would be interesting to understand if such smoking behavior change persisted during follow-up years when incident HF was detected, as this might have affected the results if smoking behavior change reported at the second screening visit was only short-term.

Thirdly, as varenicline was shown to lower the risk of HF [3] potentially, information on smoking cessation pharmacotherapy would be helpful to assess possible bias of chosen smoking cessation pharmacotherapy, if such data was collected in the study.

And lastly, the authors state that harm reduction strategy in smokers is based on reducing the number of cigarettes smoked each day. To this, we would like to add that the currently recommended harm reduction strategy includes the use of medicinally licensed nicotine-containing products [4], and there is an ongoing discussion of alternative nicotine delivery systems used by smokers under the impression of possibly reducing the health risks of smoking [5]. Therefore, it would be useful to also collect data on a type of nicotine products used (or relevant change in them) for future studies.

We respectfully suggest considering these points, especially if a continuation of the study is planned.

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## Conflict of interest

The authors declare that they have no conflict of interest.

## Compliance with Ethical Standards

This article does not contain any studies with human participants or animals performed by any of the authors.

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