

# Author Response to Letter to the Editor regarding “the Epidemiology of Bile Acid Diarrhea in Denmark” [Response to Letter]

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## Dear editor

We thank Dr. Fikri for her insightful letter concerning our recent publication and appreciate her recognition of the significance of our findings.<sup>1</sup> As Dr. Fikri underscores, our study identifies individuals with bile acid diarrhea (BAD) in Danish nationwide registries, either by the international classification of disease version 10 (ICD10) code K90.8 or a referral to a diagnostic <sup>75</sup>selenium homotaurocholic acid (SeHCAT) test followed by a prescription of a bile acid sequestrant within 365 days. Dr. Fikri notes that this definition excludes individuals suffering from BAD but not diagnosed with SeHCAT test or not treated with bile acid sequestrants and suggests that including clinical data such as the SeHCAT test results would include more individuals suffering from BAD. Our study aimed to identify a population of individuals suffering from BAD, and not to include everyone with BAD as misdiagnosed or undiagnosed individuals would be impossible to identify in the registries. Furthermore, the design of the Danish registries precludes retrieving SeHCAT test results, which, currently, only can be retrieved by manual extraction from each individual's patient file. For these reasons, we decided defining a population of individuals with a very high probability of a BAD diagnosis well aware that we might not include all individuals suffering from BAD. Dr. Fikri raises concerns about the ICD10 code K90.8, which was introduced in 2021. We agree with the limited use of this ICD10 code, which is why we added the extended definition of BAD discussed above. Addressing the true prevalence of BAD in the Danish population is an interesting study, but not one that is feasible by register-based research.

Dr. Fikri suggests addressing the relationship between BAD and comorbidities and risk factors. We agree with the importance of these studies to better understand the pathophysiology and the risks associated with BAD. Furthermore, we agree that conducting prospective studies to collect information and clinical data on individuals suffering from BAD would be highly valuable to characterize this poorly understood patient group further.

Dr. Fikri points out that our findings are not generalizable outside of Denmark. We agree that our findings should be interpreted in light of this.

Lastly, Dr. Fikri highlights the importance of comparing different treatment modalities and finds it a limitation of our study that we did not address the safety and effectiveness of liraglutide in BAD treatment. We agree on the importance of comparative studies, but this was not in the scope of this study and we find this register-based cohort unsuited to evaluate the effectiveness and safety of liraglutide. We have previously conducted a randomized, double-blind, double-dummy clinical trial comparing the treatment of individuals suffering from idiopathic or post-cholecystectomy BAD with either colesevelam or liraglutide for six weeks.<sup>2</sup> This study showed a superior effect of liraglutide compared to colesevelam on the number of individuals with a reduced daily stool frequency  $\geq 25\%$ .<sup>3</sup> Additionally, the use of liraglutide raised no safety concerns.<sup>3</sup> This publication increased awareness of the potential use of liraglutide in BAD treatment among

Danish doctors, thus, our aim with the analyses of liraglutide use in the registries was not to address its effectiveness and/or safety but to evaluate the extent of its use in BAD treatment. We nevertheless welcome more studies investigating the safety and effectiveness of different treatment modalities in BAD.

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Filip K Knop is currently employed at Novo Nordisk A/S.

## Disclosure

The authors declare no conflicts of interest regarding this communication.

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