



Is there evidence for sex differences in the association between diabetes and cancer? Reply to Dankner R, Boker LK, Freedman LS [letter]

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Received: 11 October 2018 / Accepted: 15 October 2018 / Published online: 3 November 2018
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Keywords Cancer · Diabetes · Sex differences

To the Editor: We would like to thank Dr Dankner and colleagues for their comments [1] on our paper [2].

First, we agree that sex-specific cancers, such as uterus, ovary and prostate, must contribute to the observed sex differences with regards to the association between diabetes and all-site cancer [1, 2]. However, in our analyses of site-specific cancers and their association with diabetes, significant sex differences were also observed for some non-sex-specific cancers, namely oral, stomach, liver and kidney cancer and leukaemia [2]. We can only speculate the extent by which each class of cancer contributes to the overall sex difference in the association between diabetes and all-site cancer.

Second, we agree with the possibility that a diabetes–age interaction may partially explain the observed sex differences in the association between diabetes and cancer. However, almost all the data used in our study were pooled from published data that did not include age by sex interactions. A future large-scale meta-analysis of individual participant data could address these issues.

Funding The authors received no external funding for this work. TO is supported by the John Chalmers Clinical Research Fellowship of the George Institute. SAE is supported by a UK Medical Research Council Skills Development Fellowship (MR/P014550/1). MW is a

National Health and Medical Research Council of Australia Principal Research Fellow.

Duality of interest MW is a consultant to Amgen. Both other authors declare that there is no duality of interest associated with their contribution to this manuscript.

Contribution statement All authors were responsible for drafting the article and revising it critically for important intellectual content. All authors approved the version to be published.

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2. Ohkuma T, Peters SAE, Woodward M (2018) Sex differences in the association between diabetes and cancer: a systematic review and meta-analysis of 121 cohorts including 20 million individuals and one million events. *Diabetologia* 61(10):2140–2154. <https://doi.org/10.1007/s00125-018-4664-5>

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