Article details: 2016-0043	
Title	**Cancer incidence attributable to insufficient fibre consumption in Alberta, Canada in 2012**
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Reviewer 1	Dr. Jeffrey A. Bakal
Institution	University of Alberta, Canadian VIGOUR Centre
General comments (author response in bold)	The authors have attempted to identify the change in Cancer incidence attributable to insufficient fibre intake in Alberta. 1. I would suggest some overall updating of the references as these seem dated, and this is an active area of research. **Response: There was an additional paper published (5) concerning population attributable cancer risks of dietary fibre for Australia in the time since the initial manuscript for this analysis was drafted. The manuscript has now been updated throughout to incorporate the findings from the Australian project to provide additional context to our results. Major additions have been made on p. 3 of the introduction section and p. 8 of the interpretation section.** 2. Some of the reporting of results is confusing e.g., ("A greater proportion of women (73.5-78.2%)..." is this by year, age group? something else. is it statistically significant assuming the multiple comparisons? is once group generally x% higher? **Response: These differences in prevalence of insufficient dietary fibre consumption between men and women are small differences in proportions across age groups. The text in the first paragraph of the results on p. 7 has been amended to clarify this idea. Further, the context for small differences between men and women in population attributable risks is important as while the prevalence of insufficient fibre consumption is slightly lower in men than in women, the observed population attributable risks are higher in men due to stronger relative risks for the association between fibre consumption and colorectal and colon cancers in men than in women. We believe it is important to highlight the reason (different RRs) for these findings and have added text to the second paragraph of the results section on p. 7 to clarify the rationale for some of our population attributable risk findings.** 3. What is the provincial change like an NNT or equivalent, what would it mean more generally? **Response: Population attributable risk figures for specific cancer sites such as those presented in this manuscript can be interpreted as the proportion of a specific type of cancer that could specifically be attributed to a given exposure, here insufficient fibre consumption. This value corresponds to the theoretical proportion of cancers that could be prevented if an individual risk factor were removed from the population, which in the case described by this manuscript would be if population fibre consumption levels increased such that Albertans were consuming 23 g/day of fibre. In the context of population attributable risks, since we are not evaluating a specific intervention, a concept such as number needed to treat is not really appropriate. A statement concerning the appropriate interpretation of the population attributable risk values described in this manuscript has been added to the results section in the second paragraph on p. 7.** 4. It seems like table one could be done simply graphically, as the deciles are never used again are they? **Response: We respectfully disagree with the reviewer concerning the data presented in Table 1. The three main columns presented in this table are the mean consumption levels in grams per day in each decile for each age-sex group, the deficit from the 23 g/day cutoff within each decile and finally the proportion of the population found within each decile. The final two columns represent data that is directly used in the estimation of population attributable risks in Equation 2 (deficit from 23 g/day cutoff) and Equation 3 (proportion of population in each decile). In the interests of transparency for our methods such that other researchers might replicate our work, we believe it is important to present the specific values here in table format rather than in a graph where the specific values within each decile could be more obscured.**
Reviewer 2	Dr. Raywat Deonandan
Institution	University of Ottawa, Interdisciplinary School of Health Sciences, Ottawa, Ont.
General comments (author response in bold)	This study has merit, especially as a follow-up to the famous study published last year that purported to show a link between meat-eating and increased risk of some cancers. I see no glaring methodological flaw or inappropriate conclusion here. 1. However, much like the earlier study, more clarity needs to be added (in the Limitations, and/or Conclusion and Abstract) about the absolute risk posed by a fibre insufficiency, as opposed to simply a relative risk. With this very small addition, I feel this paper is appropriate for publication. **Response: We thank the reviewer for their kind comments concerning our manuscript. Regarding the concept of absolute risk, we describe in the final paragraph of the results section on p.7 – 8 that we estimate based on population attributable risk estimates that approximately 6.0% of all colorectal cancers diagnosed in Alberta could potentially be attributed to insufficient fibre consumption. Further, we explain that these estimates translate to an excess of 114 cases of colorectal cancer in Alberta in 2012. To provide further context to these numbers, we have highlighted that a total of 1899 cases of colorectal cancer were diagnosed in 2012, such that the 114 attributable to insufficient fibre consumption can be interpreted in the context of the total provincial colorectal cancer burden.**
Reviewer 3	Dr. Jean-Pierre Pellerin

Institution	Centre Hospitalier de Verdun, Unité de médecine familiale
General comments (author response in bold)	Who can be against fibre consumption? In this article, the authors establish an associative link between colorectal, colon and rectum cancers and fibre consumption. This link come from data known in first place from data from Alberta's tomorrow project (diet information) and from World cancer research fund update project publication in 2011. The authors used the same approach than British team Parkin and Boyd with slightly different results. A Monte Carlo technique is used to produce 95% confidence intervals around population attributable risk. Calculations seem to be correct and are consistent with the data that are presented in tables 1 to 4. 1. The authors pointed the fact that there is more cancer associated with decreased fibre consumption in men than in women. For the main outcome, this difference does not reach the significance level. So, the authors should explain this discrepancy by the weakness of their volunteer sampling as they state to explain the difference between British results and Alberta results. What is responsible for cancer is complex and cannot be hold in one reason so with a non well controlled sampling everything can happen.. The rate of cancer between men and women is the same in this sampling. For women, 42 cases on 820 (5.2%) and for men, 71 cases on 1079 (6.66%) is a non significant result. In a population study, we don't have the opportunity to work with a well controlled sampling of men and women. In this case, the results that are in this article are credible. **Response: We thank the reviewer for their feedback on our manuscript. As we describe in response to comment #2 from Reviewer 1, we highlight the estimated differences in attributable percent for men and women simply to demonstrate that although a greater proportion of women were estimated to have insufficient levels of fibre consumption, the estimated population attributable risks were slightly higher in men due to differences in respective relative risks. As we describe in the response to the previous reviewer, we have added text to the results on p. 7 to further explain these differences and why we think they are noteworthy.** References: 1. Parkin D, Boyd L. 6. Cancers attributable to dietary factors in the UK in 2010. Br J Cancer 2011;105(S2):S27-30. 2. World Cancer Research Fund / American Institute for Cancer Research. Continuous Update Project Report. Food, Nutrition, Physical Activity, and Prevention of Colorectal Cancer. 2011. 3. Grundy A, Friedenreich CM, Poirier AE, Khandwala F, Brenner DR. A methodologic framework to evaluate the number of cancers attributable to lifestyle and environment in Alberta, Canada. CMAJ Open (in press). 4. Parkin DM, Boyd L. 4. Cancers attributable to dietary factors in the UK in 2010. I. Low consumption of fruit and vegetables. Br J Cancer 2011;105(S2):S19-23. 5. Nagle CM, Wilson LF, Hughes MCB, Ibiebele TI, Miura K, Bain CJ, et al. Cancers in Australia in 2010 attributable to inadequate consumption of fruit, non-starchy vegetables and dietary fibre. Aust N Z J Public Health 2015;39(5):422-8.