

STROBE Statement—checklist of items that should be included in reports of observational studies

	Item No	Recommendation
<b>Title and abstract</b>	1	<p>(a) Indicate the study’s design with a commonly used term in the title or the abstract. <i>Study estimates population attributable risks, this is described in the methods of the abstract.</i></p> <p>(b) Provide in the abstract an informative and balanced summary of what was done and what was found. <i>Please see abstract methods and results for summary of methods and findings.</i></p>
<b>Introduction</b>		
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported. <i>Introduction describes why the relation between red and processed meat consumption and colorectal cancer is important and previous international efforts to estimate population attributable cancer risks.</i>
Objectives	3	State specific objectives, including any prespecified hypotheses. <i>Last sentence of introduction.</i>
<b>Methods</b>		
Study design	4	Present key elements of study design early in the paper. <i>The first paragraph of the methods section refers readers to the methodologic protocol previously published for this work and provides an overview of the analytic strategy.</i>
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection. <i>Methods section p. 4 – 6.</i>
Participants	6	<p>(a) <i>Cohort study</i>—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up  <i>Case-control study</i>—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls  <i>Cross-sectional study</i>—Give the eligibility criteria, and the sources and methods of selection of participants  <i>Note: This manuscript describes estimates of population attributable risk that do not conform to the above study designs. Population attributable risks were estimated for the province of Alberta, as described on p. 4.</i></p> <p>(b) <i>Cohort study</i>—For matched studies, give matching criteria and number of exposed and unexposed  <i>Case-control study</i>—For matched studies, give matching criteria and the number of controls per case</p>
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable <i>Variables for this study were relative risks, population prevalence of red and processed meat consumption estimates and cancer incidence data for 2012, as described on p. 4 – 6.</i>
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group <i>Data sources for this study were the World Cancer Research Fund Continuous Update Project, Alberta’s Tomorrow Project and the Alberta Cancer Registry, as</i>

*described on p. 4 – 6.*

Bias	9	Describe any efforts to address potential sources of bias <i>Bias is addressed in the limitations section on p. 8-9.</i>
Study size	10	Explain how the study size was arrived at <i>Not applicable</i>
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why <i>Statistical analyses are described on p. 5 – 6.</i>
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding. <i>Statistical analyses are described on p. 5 – 6.</i> (b) Describe any methods used to examine subgroups and interactions. <i>Statistical analyses are described on p. 5 – 6.</i> (c) Explain how missing data were addressed. <i>Not applicable</i> (d) <i>Cohort study</i> —If applicable, explain how loss to follow-up was addressed <i>Case-control study</i> —If applicable, explain how matching of cases and controls was addressed <i>Cross-sectional study</i> —If applicable, describe analytical methods taking account of sampling strategy (e) Describe any sensitivity analyses. <i>Not applicable</i>

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<b>Results</b>		
Participants	13*	<p>(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed. <i>Not applicable to estimation of population attributable risks.</i></p> <p>(b) Give reasons for non-participation at each stage <i>Not applicable to estimation of population attributable risks.</i></p> <p>(c) Consider use of a flow diagram <i>Not applicable to estimation of population attributable risks.</i></p>
Descriptive data	14*	<p>(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders. <i>Prevalence of red and processed meat consumption in Alberta shown in Figure 1 and described in first paragraph of results on p. 6.</i></p> <p>(b) Indicate number of participants with missing data for each variable of interest. <i>Not applicable</i></p> <p>(c) <i>Cohort study</i>—Summarise follow-up time (eg, average and total amount)</p>
Outcome data	15*	<p><i>Cohort study</i>—Report numbers of outcome events or summary measures over time. <i>Total number of incident cancer cases by gender and age-group shown in Tables 4 and 5 even though this was not a cohort study.</i></p> <p><i>Case-control study</i>—Report numbers in each exposure category, or summary measures of exposure</p> <p><i>Cross-sectional study</i>—Report numbers of outcome events or summary measures</p>
Main results	16	<p>(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included. <i>95% CIs shown for population attributable risk estimates in Tables 4 and 5. Confounding not applicable to this analysis.</i></p> <p>(b) Report category boundaries when continuous variables were categorized. <i>Not applicable.</i></p> <p>(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period</p>
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses
<b>Discussion</b>		
Key results	18	Summarise key results with reference to study objectives. <i>Main findings are shown in paragraph 1 of interpretation section on p. 7.</i>
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias. <i>Main limitations discussed on p. 8-9.</i>
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence. <i>See conclusions on p. 10.</i>
Generalisability	21	Discuss the generalisability (external validity) of the study results. <i>Population attributable risks are estimated for a specific population, generalizability not relevant to same extent as for other types of epidemiologic studies.</i>
<b>Other information</b>		
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based. <i>Information on funding provided in the Acknowledgements section.</i>

\*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

**Note:** An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at <http://www.plosmedicine.org/>, Annals of Internal Medicine at <http://www.annals.org/>, and Epidemiology at <http://www.epidem.com/>). Information on the STROBE Initiative is available at [www.strobe-statement.org](http://www.strobe-statement.org).