The STROBE reporting checklist

For checking that observational epidemiology research articles can be understood and used by everyone

> **Note**
>
> If you have not used a reporting guideline before, read about how and why to use them and check whether STROBE is the most applicable reporting guideline for your work.
>
> Reporting guidelines are most useful when used early in research. When writing a manuscript or application, consider using the Full Guidance where you'll see explanations and examples for each item.
>
> After writing, demonstrate adherence by completing this checklist:
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> 1. Specify where each item is described (see Note 1).
> 2. Cite this checklist (See Note 2).
> 3. Include your completed checklist as a supplement when submitting to a journal so that future readers can use it to find information.

	Item Description	Location (or reason for not reporting)
Title and abstract		
1a. Indicate the study's design	Indicate the study's design with a commonly used term in the title or the abstract.	Abstract
1b. Abstract	Provide in the abstract an informative and balanced summary of what was done and what was found.	Abstract
Introduction		
2. Background / rationale	Explain the scientific background and rationale for the investigation being reported.	Introduction, paragraph 3
3. Objectives	State specific objectives, including any prespecified hypotheses.	Introduction, paragraph 3
Methods		
4. Study design	Present key elements of study design early in the paper.	Methods: Patients and Samples
5. Setting	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection.	Results, paragraph 1; Methods: Patients and Samples
6a. Eligibility criteria	**Cohort study:** Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up. **Case-control study:** Give the eligibility criteria, and the sources and	Methods: Patients and Samples

	methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls. **Cross-sectional study:** Give the eligibility criteria, and the sources and methods of selection of participants.	
6b. Matching criteria	**Cohort study:** For matched studies, give matching criteria and number of exposed and unexposed. **Case-control study:** For matched studies, give matching criteria and the number of controls per case.	Not applicable
7. Variables	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.	Methods: Patients and Samples
8. Data sources / measurement	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.	Methods: Patients and Samples
9. Bias	Describe any efforts to address potential sources of bias.	Not applicable
10. Study size	Explain how the study size was arrived at.	Methods: Patients and Samples
11. Quantitative variables	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen, and why.	Not applicable
12a. Statistical methods	Describe all statistical methods, including those used to control for confounding.	Methods: Statistical analyses
12b. Statistical methods – subgroups and interactions	Describe any methods used to examine subgroups and interactions.	Not applicable
12c. Statistical methods – missing data	Explain how missing data were addressed.	Methods: sequencing data analysis
12di. Statistical methods – loss to follow-up	**Cohort study:** If applicable, describe how loss to follow-up was addressed.	Not applicable
12dii. Statistical methods – matching cases and controls	**Case-control study:** If applicable, explain how matching of cases and controls was addressed.	Not applicable
12diii. Statistical methods – sampling strategy	**Cross-sectional study:** If applicable, describe analytical methods taking account of sampling strategy.	Not applicable

12e. Statistical methods – sensitivity analyses	Describe any sensitivity analyses.	Not applicable
Results		
13a. Participant numbers	Report the numbers of individuals at each stage of the study—e.g., numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed; Consider use of a flow diagram.	Results, paragraph 1
13b. Participants – non-participation	Give reasons for non-participation at each stage.	Not applicable
13c. Participants – flow diagram	Consider use of a flow diagram.	Not applicable
14a. Descriptive data – participant characteristics	Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders. Present the information in a table.	Extended data Table 1
14b. Descriptive data – missing data	Indicate the number of participants with missing data for each variable of interest.	Not applicable
14c. Descriptive data – follow-up time	**Cohort study:** Summarise follow-up time—e.g., average and total amount.	Extended data Table 1
15. Outcome data	**Cohort study:** Report numbers of outcome events or summary measures over time. **Case-control study:** Report numbers in each exposure category, or summary measures of exposure. **Cross-sectional study:** Report numbers of outcome events or summary measures.	Extended data Table 1
16a. Main results	Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence intervals). Make clear which confounders were adjusted for and why they were included.	Not applicable
16b. Main results – category boundaries	Report category boundaries when continuous variables were categorised.	Methods: RNA sequencing analysis, paragraphs 2-3; Methods: Multi-omics workflow for identification of credible driver events, paragraphs 3-5
16c. Main results – risk	If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period.	Not applicable
17. Other analyses	Report other analyses done—e.g., analyses of subgroups and interactions, and sensitivity analyses.	Not applicable
Discussion		

18. Key results	Summarise key results with reference to study objectives.	Discussion, paragraph 1-2
19. Limitations	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias.	Discussion, paragraph 5
20. Interpretation	Give a cautious overall interpretation considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence.	Discussion, paragraph 6
21. Generalisability	Discuss the generalisability (external validity) of the study results.	Discussion, paragraph 6
Other information		
22. Funding	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.	Acknowledgements