eBioMedicine **is a gold open-access journal dedicated to publishing original research that illuminates, or aims to modify, disease pathways and mechanisms—with the goal of advancing our knowledge in any biomedical discipline with relevance to human health. We publish papers investigating the basic determinants of human health and disease, the discovery and characterisation of new therapeutic targets and treatments, and the identification of biomarkers and diagnostic tools which may help researchers and clinicians better understand and monitor disease.** ***eBioMedicine*** **covers the whole spectrum of biomedical research, from in vitro and preclinical studies with clear human relevance, through to proof-of-concept studies and clinical trials. The journal will also publish relevant reviews, commentaries and opinion pieces. We aspire to catalyse dialogue and collaboration between basic scientists, clinical researchers and healthcare professionals, enhance the accessibility and applicability of basic research findings for health professionals, and promote a better understanding of clinical challenges for biomedical researchers.**

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Manuscripts must be solely the work of the author(s) stated, must not have been previously published elsewhere, and must not be under consideration by another journal. ***The Lancet*** **journals are signatories of the Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals, issued by the International Committee of Medical Journal Editors (ICMJE Recommendations), and to the Committee on Publication Ethics (COPE) code of conduct for editors. We follow COPE's guidelines.**

How to submit your paper

Manuscript submission

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First submissions to ***eBioMedicine*** **should include:**

1. Covering letter
2. Manuscript including tables and panels
3. Figures
4. Author statement form (see next section)
5. Declaration of interests and source of funding statements (Conflict of Interest statement, see next section)
6. In-press papers—one copy of each with acceptance letters
7. Protocols and CONSORT details for randomised controlled trials or relevant reporting details for non-RCT studies, such as ARRIVE checklist for animal studies. Please see full list of reporting guidelines in the Articles section, below.
8. We encourage disclosure of correspondence from other journals and reviewers, if previously submitted, and we might contact relevant editors of such journals
9. Research in context panel, for all primary research Articles

Statements, permissions, and signatures

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- Designated authors should meet all four criteria for authorship in the ICMJE Recommendations
- All authors, and all contributors (including medical writers and editors), should specify their individual contributions at the end of the main text within the manuscript (in addition to the Author statements form, below)
- We require that more than one author has directly accessed and verified the underlying data reported in the manuscript. For research articles that are the result of an academic and commercial partnership, at least one of the authors named as having accessed and verified data must be from the academic team. The contributors statement should state who those authors are.

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- For author groups of more than 30 members, we encourage use of a collaborator or study group for any additional authors. For this collaborator or study group, if they wish to be indexed to the paper, please provide a separate document with a table of first names and surnames of all members of the group (this is to ensure that PubMed and similar databases encode the names correctly).

Reporting sex-based and gender-based analyses

Reporting guidance

For research involving or pertaining to humans, animals, model organisms, or eukaryotic cells, investigators should integrate sex-based and gender-based analyses into their research design according to evolving funder/sponsor requirements and best practices within a field. Authors should address their research's sex and/or gender dimensions in their manuscript. In cases where they cannot, they should discuss this as a limitation to their research's generalisability. With research involving cells and model organisms, researchers should use the term "sex". With research involving humans, researchers should consider which terms best describe their data (see Definitions section below). Authors can refer to the Sex and Gender Equity in Research (SAGER) Guidelines and the SAGER guidelines checklist. They offer systematic approaches to the use and editorial review of sex and gender information in study design, data analysis, outcome reporting, and research interpretation. However, there is no single, universally agreed-upon set of guidelines for defining sex and gender or reporting sex-based and gender-based analyses.

Definitions

In human research, the term "sex" carries multiple definitions. It often refers to an umbrella term for a set of biological attributes associated with physical and physiological features (eg, chromosomal genotype, hormonal levels, internal and external anatomy). It can also signify a sex categorisation, most often designated at birth ("sex assigned at birth") based on a newborn's visible external anatomy. The term "gender" generally refers to socially constructed roles, behaviours, and identities of women, men, and gender-diverse people that occur in a historical and cultural context, and might vary across societies and over time. Gender influences how people view themselves and each other, how they behave and interact, and how power is distributed in society. Sex and gender are often incorrectly portrayed as binary (female/male or woman/man), concordant, and static. However, these constructs exist along a spectrum that includes additional sex categorisations and gender identities, such as people who are intersex/have differences of sex development (DSD), or identify as non-binary. In any given person, sex and gender might not align, and both can change. Sex and gender are not entirely discrete concepts and their definitions continue to evolve. Biology and society influence both, and many languages do not distinguish between them. Since the terms "sex" and "gender" can be ambiguous, authors should describe the methods they use to gather and report sex-related and/or gender-related data (eg, self-report or physician-report, specific biological attributes, current sex/gender, sex assigned at birth, etc) and discuss the potential limitations of those methods. This will enhance the research's precision, rigor, and reproducibility, and avoid ambiguity or conflation of terms and the constructs to which they refer. Authors should use the term "sex assigned at birth" rather than "biological sex", "birth sex" or "natal sex" as it is more accurate and inclusive. When ascertaining gender and sex, researchers should use a two-step process: (1) ask for gender identity allowing for multiple options and (2) if relevant to the research question, ask for sex assigned at birth. In addition to this defining guidance and the SAGER guidelines, you can find further information about reporting sex and gender in research studies on Elsevier's diversity, equity, and inclusion in the publishing author guide available here.

Reporting on race and ethnicity

We encourage researchers to include people from minoritised racial or ethnic populations as participants, and to plan to report and analyse data by race, ethnicity, or both. Disaggregating these data can help to uncover health inequities. In the Methods section, please explain the definitions, categories, or conceptual framework used and how they were assigned (eg, self-report, census or registry data). If specific data on race or ethnicity were not collected, analysed, or reported, it would be useful to give the reasons for this if possible.

Furthermore, for research specifically involving groups that have historically been marginalised, how have researchers prioritised community engagement and self-determination in the research process? For research involving Indigenous peoples, a possible tool to help you report this is the CONSIDER statement.

In the Discussion section, please discuss the representativeness of the study population, to help readers assess the applicability of the findings to their setting.

Because race is a sociocultural construct, not a fixed biological trait, we ask authors to avoid use of race-based reference ranges and algorithms. For all manuscripts, any discussion of data in relation to race, ethnicity, or both should consider the wider context of socioeconomic, historical, and other structural drivers, for which race or ethnicity might be surrogate measures. We ask authors to qualify race-based associations drawn from observational data by discussing the potential limitations of such data and the possible role of unmeasured confounders. Such explanation can reduce the potential for harm from simplistic attributions to race.

We also ask authors to consider a strengths-based approach rather than a deficit discourse, when discussing findings related to race and ethnicity. For instance, discuss how findings might promote health and wellbeing, rather than focusing on problems.

The use of AI and AI-assisted technologies in scientific writing

Where authors use AI and AI-assisted technologies in the writing process, these technologies should only be used to improve readability and language of the work and not used to replace researcher tasks such as producing scientific insights, analysing and interpreting data, or drawing scientific conclusions. Such writing assistance should be disclosed in a statement at the end of the article in the acknowledgment section. Applying these technologies should only be done with human oversight and control, and authors should carefully review and edit the result because AI can generate authoritative-sounding output that can be incorrect, incomplete, or biased.

Authors who have used AI technology in any part of their study, enhancing search strategies, or in the development of Review articles should describe its use in the methods section in sufficient detail to enable replication of the approach including the tool used, version, and prompts where applicable. Authors should not list AI and AI-assisted technologies as an author or co-author, nor cite AI as an author. Authors are ultimately responsible and accountable for the originality, accuracy, and integrity of the work.

Forms and signatures

For Reviews, Comments, and Correspondences, we require you to upload your forms at submission. For original research (Articles), if forms have not been included in the initial submission, we will request them after peer review. The following signed statements are a pre-requisite for acceptance and publication in *eBioMedicine*:

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- Conflicts of interest statements (ICMJE forms)
- Statements of role, if any, of medical writer or editor
- Acknowledgments—written consent of cited individual
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These statements can be scanned and submitted electronically with your submission. Please note that *The Lancet* journals will accept hand-signed and electronic (typewritten) signatures.

Declaration of interests

A conflict of interest exists when professional judgement concerning a primary interest (such as patients' welfare or validity of research) may be influenced by a secondary interest (such as financial gain). Financial relationships are easily identifiable, but conflicts can also occur because of personal relationships or rivalries, academic competition, or intellectual beliefs. A conflict can be actual or potential, and full disclosure to the Editor of all relationships is a requisite. Purposeful failure to disclose conflicts is a form of misconduct and might lead to publication of a correction or even to retraction. All submissions to *eBioMedicine* must include disclosure of all relationships in which there is a potential or actual conflict of interest, even if it not directly relevant to the submitted work. The Editor may use such information as a basis for editorial decisions and will publish all disclosures that authors declare on their conflict of interests form. It is the corresponding author's responsibility to check that all declarations made by authors on their conflicts of interest form are included at the end of the manuscript. Agreements between authors and study sponsors that interfere with authors' access to all of a study's data, or that interfere with their ability to analyse and interpret the data and to prepare and publish manuscripts independently, may represent conflicts of interest, and should be avoided. Authors may be required to provide the journal with any such agreements in confidence.

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- All authors are required to provide a Conflict of Interest Statement and should complete a standard form, which is available at https://www.thelancet.com/for-authors/forms?section=icmje-coi. The form has been modified by the ICMJE following consultation with authors and editors. Further information is available in a joint ICMJE statement published on July 1, 2010. For more information see *Lancet* 2009; **374:** 1395–96.
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- At the end of the Methods section, under a subheading "Role of the funding source", authors must describe the role of the study sponsor(s), if any, in study design; in the collection, analysis, and interpretation of data; in the writing of the report; and in the decision to submit the paper for publication
- If there is no Methods section, the role of the funding source should be stated as an acknowledgment. If the funding source had no such involvement, the authors should so state

Role of medical writer or editor

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Manuscript types and formats

Please ensure that all submissions to *eBioMedicine* follows the guidelines provided for each article type. For instruction on how to format the text of your paper, including tables, figures, panels, and references, please see our **Formatting guidelines.**

Articles

Reporting Standards

Interventional studies:

We require the registration of all interventional trials, whether early or late phase, in a primary register that participates in WHO's International Clinical Trial Registry Platform (see *Lancet* 2007; **369:** 1909–11) or in ClinicalTrials.gov, in accord with ICMJE recommendations. We also require full public disclosure of the minimum 24-item trial registration dataset at the time of registration and before recruitment of the first participant (see *Lancet* 2006; **367:** 1631–35). The registry must be independent of for-profit interest

Reports of trials must conform to CONSORT 2010 guidelines, and should be submitted with a full protocol in English, or, with the full protocol and a synopsis in English including details of enrolment criteria, outcomes/endpoints, and statistical considerations. Please also submit a statistical analysis plan with the protocol if there is one

All reports of randomised trials should include a section entitled Randomisation and masking, within the Methods section. Please refer to The Lancet's formatting guidelines for randomised trials

Cluster-randomised trials must be reported according to CONSORT extended guidelines

Randomised trials that report harms must be described according to extended CONSORT guidelines

Clinical trials that report interventions using artificial intelligence must be described according to the CONSORT-AI Extension guidelines and their protocols must be described according to the SPIRIT-AI Extension guidelines

Observational studies (cohort, case–control, or cross-sectional designs) must be reported according to the STROBE statement, and should be submitted with a full protocol in English, or, with the full protocol and a synopsis in English including details of enrolment criteria, outcomes/endpoints, and statistical considerations. We encourage the registration of all observational studies on a WHO-compliant registry (see *Lancet* 2010; **375:** 348)

Please carefully follow the linked guidelines of reporting standards if your study falls within one the following categories, and fill in and return the checklist(s) where applicable:

Animal preclinical studies	ARRIVE
Observational studies using routinely collected health data*	RECORD
Systematic reviews and meta-analyses	PRISMA
Genetic association studies	STREGA
Genetic risk prediction studies	GRIPS
Diagnostic/prognostic studies	STARD and TRIPOD
Case reports	CARE
Heath economic evaluation	CHEERS
Health quality improvement	SQUIRE
Biospecimens	BRISQ
Microarrays	MIAME

For more information on reporting standards, please visit: http://www.equator-network.org/

When using a study group, collaborator group, or Consortia instead of authors' names, please be aware that individuals' names will not explicitly appear when your published Article is uploaded to MEDLINE/PubMed. Your Article will still be discoverable via a search

for a specific named author, but only the collective name given to the study will appear on that platform. If you need more information, please contact us.

Article section order

All accepted articles must conform to the following order:

- Title (article title, full authorship and affiliations, corresponding author contact details)
- Abstract
- Keywords (4–6)
- Research in Context
- Introduction
- Methods (including Ethics, Statistics, and Role of Funders)
- Results
- Discussion
- Contributors
- Declaration of Interests
- Acknowledgments
- Data Sharing Statement
- References
- Figure Legends

Title page

Titles should be informative but not excessively detailed or heavy on jargon. Please avoid abbreviations in title. Please either define functionally (eg, "the influenza viral HA protein") or spell out ("influenza viral hemagglutinin"). A brief title, author name(s), preferred degree (one only), affiliation(s), and full address(es) of the authors must be included. Full names for all authors must be included in the format Julie M. Moore, not Moore J.M. or J.M. Moore. The name and address of the corresponding author should be separately and clearly indicated with email and telephone details.

Abstract

Include an abstract (semi-structured summary), with five paragraphs (Background, Methods, Findings, Interpretation, and Funding), not exceeding 250 words. Our electronic submission system will ask you to copy and paste this section at the "Submit Abstract" stage

For randomised trials, the abstract should adhere to CONSORT extensions: abstracts (see *Lancet* 2008; **371:** 281–83)

For intervention studies, the abstract should include the primary outcome expressed as the difference between groups with a confidence interval on that difference (absolute differences are more useful than relative ones). Secondary outcomes can be included as long as they are clearly marked as secondary and all such outcomes are reported

Keywords

Please provide a short list of keywords

Research in context

All research papers (including systematic reviews/meta-analyses) submitted to *eBioMedicine* must include a panel putting their research into context with previous work in the format outlined below (see *Lancet* 2014; **384**: 2176–77, for the original rationale).

Research in context

Evidence before this study

This section should include a description of all the evidence that the authors considered before undertaking this study. Authors should briefly state: the sources (databases, journal or book reference lists, etc) searched; the criteria used to include or exclude studies (including the exact start and end dates of the search), which should not be limited to English language publications; the search terms used; the quality (risk of bias) of that evidence; and the pooled estimate derived from meta-analysis of the evidence, if appropriate.

Added value of this study

Authors should describe here how their findings add value to the existing evidence.

Implications of all the available evidence

Authors should state the implications for practice or policy and future research of their study combined with existing evidence. In particular, for *eBioMedicine*, please describe why the findings are relevant to human health (for the more basic research papers), and/or how the findings can help improve our understanding of the disease mechanisms (for the more clinical papers).

Research in context panels should not contain references; key studies mentioned here should be referenced in the main text.

This panel should not contain references. Editors will use this information at the first assessment stage and peer reviewers will be specifically asked to check the content and accuracy. This should contain a full description and discussion of the context. This should be written not only for scientists and clinicians, but also for curious members of the general public. Therefore, please use clear and simple language, avoiding jargon and abbreviations.

Introduction

Please include a clear explanation for the rationale of the study, and sufficient scientific background information. The general reader (i.e., non-specialist) should have a clear sense for why the study was undertaken, and how the current study advances translational goals relative to the published literature. Define all abbreviations first time even if they have been defined in the Abstract.

Methods

Provide sufficient detail to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarised, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.

Replicates

Authors should report how often each experiment was performed and whether the results were substantiated by repetition under a range of conditions. Sufficient information about sample collection must be provided to distinguish between independent biological data points and technical replicates.

Statistics
Statistics should be fully reported in the paper, including the statistical test used, exact value of N, definition of centre, dispersion and precision measures (e.g., mean, median, SD, SEM, confidence intervals).

Sample-size estimation
Authors should state whether an appropriate sample size was computed when the study was being designed and include the statistical method of computation. If no power analysis was used, include how the sample size was determined.

Randomisation
Authors should state whether the samples were randomised and specify method of randomisation, for all experiments.

Blinding
Authors should state whether experimenters were blind to group assignment and outcome assessment, for all experiments.
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Ethics statement
Include a statement to indicate approval by appropriate ethics committee on animal and human experimentations.

Reagent identification
In an effort to support reproducibility, we request that you please—whenever available—include a Research Resource Identifier (RRID) for any biological reagents used in the study. These include, for example, antibodies, genetically modified organisms and cell lines. To find an RRID, please visit https://scicrunch.org/resources and enter your search term(s) there. For search tips and help, contact rii-help@scicrunch.org. Once you have located an RRID, please insert "RRID:" plus the identifier in the appropriate location in the manuscript. For example:

- Antibodies: "Sections were stained with a rabbit polyclonal antibody against ERK1 (Abgent Cat# AP7251E, RRID: AB_2140114)."
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Newly described data sets must be deposited to a public repository, and accession numbers must be clearly identified under a separate subheading at the end of the Methods section. Please refer to relevant database identifiers using the following format in your article: "Database: xxxx" for single accession numbers and "Database: xxxx, yyyy, zzzz" for multiple accession numbers (e.g., "Genbank: NM_000492"; "GEO: GSE6364"; "PDB: 1TUP, 1KW4, 3H5X"). Examples of appropriate public repositories are:

- DNA and RNA sequences: GenBank, EMBL-EBI, DDBJ
- Protein sequence: EMBL-EBI, Protein Data Bank
- Microarray and deep sequencing data: GEO, ArrayExpress
- SNPs and CNVs: dbSNP, DGVa, dbVAR
- Genotypes and phenotypes: dbGaP
- Proteomics data: PRIDE, PeptideAtlas
- Protein interaction data: IMEx consortium of databases
- Chemical compound: PubChem
- Brain imaging data: OpenfMRI repository, Neurovault repository

Results
Subheadings should be fewer than 100 characters including spaces. Please describe the experiments clearly and what each figure shows. All figures and tables must be called out in sequential order.

Tables should be provided in an editable Word or Excel format (so individual numbers/texts can be copied). Please ensure that each table fits within one A4-sized page.

Discussion
Please include discussion on limitations, generalisability, and interpretation of results. The Discussion should be no longer than 5 pages of A4 paper. Please do not include subheadings in the Discussion, and please do not repeat a description of the results.

Please conclude with a brief paragraph highlighting main points

of study, including a statement regarding the translational value of the work. As with the Introduction and Abstract, please make sure the language is clear to the general audience, including non-specialists.

Data sharing

From September 21, 2020, all submitted research Articles must contain a data sharing statement, to be included at the end of the manuscript. Data sharing statements must include:

- Whether data collected for the study, including individual participant data and a data dictionary defining each field in the set, will be made available to others ("undecided" is not an acceptable answer);
- What data will be made available (deidentified participant data, participant data with identifiers, data dictionary, or other specified data set);
- Whether additional, related documents will be available (eg, study protocol, statistical analysis plan, informed consent form);
- When these data will be available (beginning and end date, or "with publication", as applicable);
- Where the data will be made available (including complete URLs or email addresses if relevant);
- By what access criteria data will be shared (including with whom, for what types of analyses, by what mechanism – eg, with or without investigator support, after approval of a proposal, with a signed data access agreement - or any additional restrictions).

See table for examples. Clinical trials that begin enrolling participants on or after Jan 1, 2019, must include a data sharing plan in the trial's registration. If the data sharing plan changes after registration, this should be reflected in the statement submitted and published, and updated in the registry record. Mendeley Data is a secure online repository for research data, permitting archiving of any file type and assigning a permanent and unique digital object identifier (DOI) so that the files can be easily referenced. If authors wish to share their supporting data, and have not already made alternative arrangements, a Mendeley DOI can be referred to in the data sharing statement.

Acknowledgements

Acknowledgements should be brief, and should not include thanks to anonymous referees and editors, extraneous words, or fulsome comments. Acknowledgements can contain grant and contribution numbers.

Declaration of interests

At the end of the text, under a subheading "Declaration of interests", all authors must disclose any financial and personal relationships with other people or organisations that could inappropriately influence (bias) their work. Examples of financial conflicts include employment, consultancies, stock ownership, honoraria, paid expert testimony, patents or patent applications, and travel grants, all within 3 years of beginning the work submitted. If there are no conflicts of interest, authors should state that none exist

Contributors

Please list here the contribution each author made to the manuscript—eg, literature search, figures, study design, data collection, data analysis, data interpretation, writing etc. If all authors contributed equally, please state this. The information provided here must match that of the Author statements form.

References

All references must be in Vancouver style formatting. Please see more detailed information below in Formatting section.

Figure legends

Please provide titles for all figures. Legends should briefly describe the experiment and clearly describe the display item. There should be no discussion or statement (conclusion) about the results. Each part of the display item should be clearly defined and explained, e.g., numbers in the quadrant indicate the percentage of cells. Statistical tests should be clear. Error bars should be defined. The number of independent experiments must be indicated. Please be sure to include number of subjects used for each experiment.

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All Articles should, as relevant:

- When reporting Kaplan-Meier survival data, at each timepoint, authors must include numbers at risk, and are encouraged to include the number of censored patients
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- All accepted articles should include a link to the full study protocol published on the authors' institutional website (see

Lancet 2009; **373:** 992 and *Lancet* 2010; **375:** 348)
- We encourage researchers to enrol women and ethnic groups into clinical trials of all phases, and to plan to analyse data by sex and by race
- Please avoid priority claims such as "first", "new" or "novel".
- Define all abbreviations.

Comment

- This section contains commentaries that accompany papers published in *eBioMedicine*, or to issues of wide-reaching concern in translational research. Most commentaries are commissioned, but unsolicited commentaries are also welcome. Commentaries may be peer reviewed
- Commentaries should be no more than 750 words, 10 references, and one figure, panel, or small table
- See **Conflicts of Interest** guidelines for comments

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- Only one table or figure is permitted, and there should be no more than 5 references and five authors
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- Any substantial error in any article published in *eBioMedicine* should be corrected as soon as possible. Blame is not apportioned; the important thing is to set the record straight
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Authorship

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With a maximum of 150 words, briefly explain the necessary background and encapsulate the take-home message for a non-specialist reader. Please emphasise the recent developments or novel conclusions, concepts, or models that make your Review timely.

Keywords

Please provide 4-6 descriptive keywords.

Main text

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The Review can contain up to 5 additional items (Figures, Tables, Text Boxes), to enhance the understanding and the interest level of the readers. Each item should have a short explanatory title, and be cited in the main text. If any item has been published previously, the original source must be acknowledged, and the Review authors are responsible to obtain copyright permission as necessary.

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Please provide a short paragraph highlighting important questions for future research. This section provides an excellent opportunity to offer input and guidance on new directions for the field.

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Example:

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Data for this Review were identified by searches of MEDLINE, Current Contents, PubMed, and references from relevant articles using the search terms "sentinel node", "breast cancer", and "axilla". Abstracts and reports from meetings were included only when they related directly to previously published work. Only articles published in English between 1980 and 2006 were included.

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References

- Vancouver style—eg,

  —Smith A, Jones B, Clements S. Clinical transplantation of tissue-engineered airway. *Lancet* 2008; **372:** 1201–09.

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