

Guidelines for authors of Primer articles

Primer articles in *Nature Reviews Disease Primers* provide authoritative overviews of a disease or disorder. The Primers give a global perspective for the benefit of biomedical scientists, putting current clinical and translational challenges into context. These articles are meant to be introductory and cover all aspects from epidemiology to disease mechanisms, diagnosis and treatment. *Nature Reviews Disease Primers* is targeted towards readers from a postgraduate level and upwards, including practicing doctors, researchers and academics, and should be accessible to readers working in any biomedical discipline.

Manuscript elements

Title

The title should be the name of the disease or disorder being discussed.

Affiliations

Our preference is to minimize the number of addresses per author where possible. Affiliations should be limited to primary addresses or those that must be cited for funding reasons. Additional affiliations and/or funding information can be added to the Acknowledgements section. Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Abstract

The unstructured abstract of up to 200 words should introduce the main themes of the article in a succinct, easily digestible way to engage a broad readership. All information mentioned in the abstract must be addressed in the main article. The abstract should contain minimal specialist details, no references and no display item citations.

Main headings

Primer articles follow a rigid structure, and must include all the major headings detailed below.

Introduction

The introduction should define the disease and outline, briefly, its staging and classification.

Epidemiology

This section should describe the global burden of disease, and include who is primarily affected in the different regions, incidence, prevalence, etc. Please note any areas in which there are no available data, or where the data are unreliable.

Mechanisms/pathophysiology

This section should focus on the molecular mechanisms of the disease or disorder. Key proteins and genes can be described here, as can relevant disease models (be they cell lines, animal models or computational models). This section must include at least one figure that highlights the established (and/or speculative) aberrant pathways involved.

Diagnosis, screening and prevention

This broad section should discuss pertinent issues relevant to clinical practice. Risk factors (genetic or environmental), clinical and pathological diagnosis, the role of imaging and histology can be described. The differential diagnostic procedure, factors that hinder a diagnosis, screening methods and global variation in their implementation can also be described. Biomarkers can also be discussed in this section, as can imaging innovations and uses. Preventive measures and their mechanisms of action, efficacy and global/public health impact should also be included, where applicable.

Management

This section should describe the current standard of care (around the world), with little or no emphasis on historical perspectives. If biomarkers for drug response are available, these can be discussed here. The treatments currently under development can be included, with drug targets being related back to the pathophysiology section and the main drivers of disease. Are there reports of treatment resistance?

Quality of life

This section should describe the major quality-of-life issues patients face, and how these are influenced by the treatments described in the previous section. This section can also discuss life expectancy, patient-reported outcomes, palliative care and comorbidities.

Outlook

This section should outline the key outstanding research questions in the field. On what will researchers focus their efforts in the next 5–10 years? Will emerging technologies and advances in other fields influence the research trajectory?

Subheadings

Subheadings should be used to subdivide main sections to help guide non-specialist readers. Up to two levels of subheadings are permitted, with a maximum of 39 and 80 characters, respectively, including spaces.

References

Approximately 25 references per 1,000 words of article text are recommended; see correspondence from the handling editor for the specific limits for your article. Please keep the reference list as up to date as possible and avoid referring extensively to your own published work. Citations of personal communications should be kept to a minimum and not included in the reference list; written permission from the correspondent must be provided to the handling editor.

Papers in the numbered reference list must have been published or accepted for publication by a named publication. For in-press articles, embargo times must be considered, and an e-mail confirming acceptance from the editors of the original research journal may be required. Meeting abstracts and presentations, or articles deposited in recognized preprint servers, should be avoided but may be included at the editor's discretion.

References should be included as superscript numbers and cited sequentially in the following order: main text, boxes, figures and then tables. The numbered references should be listed at the end of the article in the following format:

1. Author, A. B. Title of the article. *Nat. Struct. Mol. Biol.* **7**, 101–109 (2003).
2. Author, A. B. & Author, B. C. Title of the article. *Nat. Cell Biol.* **6**, 123–131 (2001).
3. Author, A. B., Author, Z. X. & Author, B. C. Title of the article. *EMBO J.* **25**, 3454–3461 (2006).
4. Author, A. B. in *Title of Book* (ed. Surname, I. N.) 75–98 (Publisher, City, 2000).

If a reference has six or more authors, only the first author should be listed followed by 'et al.'

Clinical trials should be cited as a reference using the following format:

5. US National Library of Medicine. *ClinicalTrials.gov*, <https://clinicaltrials.gov/ct2/show/NCT01939899> (2016).

General websites can be provided in a 'further information' box, but specific online articles should be cited as a reference using the following format:

6. Author. Title of online article. *Website name*. http address (2015).

The *Nature Reviews* style can be obtained for Endnote (see <http://www.endnote.com/support/enstyles.asp>).

Highlighted references

For each major section, please select 2–3 references of particular importance and provide a single sentence for each, highlighting the significance of the work.

Display items

Primers should have at least one display item (Boxes, Figures or Tables) per major section to help explain specific points made in the main text or to explain the background science. These items must be cited in the correct order within the main text in the format (FIG. 1). We prefer to avoid reproducing material from other publications, unless it is exceptionally informative. For further information, please see the Materials from third parties section.

Boxes

Boxes should be provided as part of the article document. These display items can be useful for explaining basic concepts or for providing peripheral discussions of interest. Boxes must have a short title, can contain a maximum of 300 words and may include an illustration, a table or equations. Subheadings and bullet points are also permitted. Footnotes may be used sparingly.

Figures (see also our [Artwork guide](#))

Figures can include drawn schematics, photographs, histology slides, medical imaging scans and/or graphs. Each figure must be fully labelled, have a short title and have a concise legend that guides the reader through each component of the figure. All abbreviations must be defined in the legend.

Schematics will be redrawn and developed by our in-house team of art editors in consultation with the handling editor after the article has been peer reviewed. Multiple panels (designated a, b, c, and so on) can be included in a single figure. Please bear in mind the following when

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Photographs should be supplied in at least 300 dpi resolution at their final published size. We support the following image formats: JPEG, TIFF, PSD and EPS. Ideally, photographic files will be in CMYK colour format rather than RGB. We will need to obtain consent to use photographs in which individuals can be identified; please discuss this with the handling editor. Sensitive images will be included in the PDF and print versions of the article only (not the HTML version).

Tables

Tables should be provided as part of the article document. These display items should be clear and as simple as possible, have a short title, no legend, contain at least three columns of data and preferably fit on one portrait-oriented A4 page. All cells must have an entry, footnotes may be used and definitions of all abbreviations must be provided. For tables with large amounts of graphical content (for example, chemical structures), please provide separate image files.

Videos

Videos can be included as supplementary information online. We support the following video formats: MP4, AVI, MOV, MPG, QT, WMV and RV. The maximum file size supported is 2 GB.

Acknowledgements (optional)

You may use this section to thank any funding bodies or acknowledge help with preparing the manuscript.

Contributions

Authors are requested to declare their authorship contribution during the submission process. A statement of these contributions will be published in the final article.

Supplementary information

Supplementary display items can be included at the editor's discretion if they add substantial value to the article. Please note that videos or images featuring sensitive content cannot be published as Supplementary information. Supplementary items are not edited and supplementary figures are not redrawn by the journal, so authors are asked to ensure that they are accurately, clearly and succinctly presented. Supplementary items must be referred to in the main text, in the format (Supplementary information S1 (box/figure/table)) or (Supplementary video 1). They should be submitted in a single document (with a single reference list) where possible, and appear in the order of citation in the main text. Large spreadsheets and videos can be supplied separately.

Editorial stages**Submission**

Articles should be submitted via our web-based manuscript tracking system using the link supplied by the handling editor. The article files should contain the article and any tables or boxes in a single Microsoft Word document; the figures should be provided in a separate single file if possible. When the files have been successfully uploaded and received by the handling editor, you will receive an e-mail acknowledgement.

File types

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- Please provide native Chemdraw files (.cdx) for chemical structures.

Initial editorial assessment

The editor will assess the organization, structure and accessibility of the article and may contact authors to discuss any initial problems before formal peer-review. They might also suggest additional text sections and display items at this stage.

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You will have a chance to review the final text and display items in a typeset proof, which will be e-mailed to the corresponding author as a PDF. Only essential changes (factual correctness, typing errors, serious layout problems) can be made at this stage; you will have two working days to check the proofs.

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