GUIDE FOR AUTHORS

INTRODUCTION
The Portuguese Journal of Cardiology, the official journal of the Portuguese Society of Cardiology, was founded in 1982 with the aim of keeping Portuguese cardiologists informed through the publication of scientific articles on areas such as arrhythmology and electrophysiology, cardiovascular surgery, intensive care, coronary artery disease, cardiovascular imaging, hypertension, heart failure and cardiovascular prevention. The Journal is a monthly publication with high standards of quality in terms of scientific content and production. Since 1999 it has been published in English as well as Portuguese, which has widened its readership abroad.

The Journal accepts the following categories of articles:

**Research** (Original Investigation and Meta-Analysis), **Review and Education** (Narrative Reviews, Systematic Reviews -without meta-analysis, Guidelines, Case Reports, Images in Cardiology and Snapshots), **Opinion** (Current Perspective), **Correspondence** (Editorial Comment, Letters to the Editor, Research Letter and Observation)

*Types of article*

Manuscripts submitted for publication should be prepared in accordance with the "Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals" of the International Committee of Medical Journal Editors (ICMJE). This document is available at [http://www.icmje.org/recommendations/](http://www.icmje.org/recommendations/).

**Summary table** of Revista Portuguesa de Cardiologia types of article characteristics.

**Original Investigation**

Original Investigation articles cover areas of clinical or basic research: Clinical trial, Meta-analysis, Intervention study, Cohort study, Case-control study, Epidemiologic assessment, Survey with high response rate, Cost-effectiveness analysis, Decision analysis, Study of screening and diagnostic tests, Other observational studies). They should have a maximum of 5000 words, with a total of up to 15 tables and/or figures, and should be structured as follows: Abstract (maximum 250 words; divided into Introduction and Objectives, Methods, Results and Conclusion(s)); 3-10 keywords; Introduction; Objectives; Methods; Results; Discussion; Conclusion(s); Acknowledgements, if any; References (up to 75); and figure legends, if any. Follow EQUATOR Reporting Guidelines.

**Review Articles and Systematic Reviews**

Review Articles should have a maximum of 5000 words, with a total of up to 15 tables and/or
figures, and should be structured as follows: Abstract (maximum 250 words; unstructured); 3-10 keywords; Introduction; thematic sections at the discretion of the authors; Conclusion(s); Acknowledgements, if any; References (up to 100); and figure legends, if any.

Systematic Reviews should be structured as Introduction, Methods, Results, Discussion and Conclusion(s). The subject should be clearly defined. The objective of a systematic review should be to produce an evidence-based conclusion. The Methods should give a clear indication of the literature search strategy, data extraction, grading of evidence and analysis.

Systematic Reviews should not normally exceed 4000 words, with a total of up to 6 tables and/or figures and up to 100 references.

Authors are strongly recommended to consult the PRISMA statement (http://www.prisma-statement.org/), which is intended to help improve the reporting of systematic reviews and meta-analyses. We encourage authors to develop a systematic review protocol (e.g., following PRISMA-P) and register with PROSPERO.

Guidelines

It is recommended to consult the AGREE II instrument for which items should be reported that highlighted particular quality aspects of guideline development. In general, published statements intended to guide clinical care (e.g., guidelines, practice parameters, recommendations, consensus statements and position papers) should describe the clinical problem to be addressed, the mechanism by which the statement was generated, a review of the evidence for the statement (if available), and the statement on practice itself.

To minimize confusion and to enhance transparency, such statements should begin with the following questions, followed by brief comments addressing each question:

- What other guideline statements are available on this topic?
- Why was this guideline developed?
- How does this statement differ from existing guidelines?
- Why does this statement differ from existing guidelines?

The statement should have an unstructured abstract of up to 350 words, 3 to 10 keywords and can include up to 4000 words, a total of up to 6 tables and/or figures and up to 100 references.

Case Reports

Authors should use the CARE guidelines as a guiding framework. Case reports should not exceed 1500 words of body text, with up to 15 references and four tables or figures. They must include an abstract (unstructured, maximum 250 words) and bulleted statements (maximum 70 words) in answer to the following questions: What’s already known about this topic? and What does this study add?

Please see the Ethics section of the Instructions regarding preservation of patients’ privacy. Case Reports must have no more than 5 authors.

Images in Cardiology

Images in Cardiology should have a maximum of 250 words, without Abstract, keywords, tables, or division into sections and up to 5 references may be included.

Snapshots
This section is intended for the publication of rare or educational cases or novel techniques in cardiology. The text should not exceed 500 words and up to 3 figures with brief captions and up to 5 references may be included. Snapshots must have no more than 3 authors.

**Current Perspective**

This type of manuscript is submitted upon invitation by the Editorial Board. It may cover a broad diversity of themes focusing on cardiology and healthcare: current or emerging problems, management and health policies, history of medicine, society issues and epidemiology, among others. An author who wishes to propose a manuscript in this section is requested to send an abstract to the Editor-in-Chief including the title and Author list for evaluation. The text should not exceed 1200 words, and up to 10 references, two tables or two figures are allowed. An abstract is not required.

**Editorial Comment**

Editorials are submitted at the invitation of the Editor. They should not exceed 1500 words and can contain up to 20 references and 1 table and 1 figure. They do not have an Abstract or keywords.

**Letters to the Editor**

Letters to the Editor on articles previously published in the Journal will be considered up to 8 weeks after the publication of the article in question. They should not exceed 800 words and can contain up to 2 figures but without Abstract, keywords or tables. They should have no more than 3 authors.

**Research Letter**

Research Letters are concise, focused reports of original research. These should not exceed 600 words of text and 6 references and may include up to 2 tables or figures. Online supplementary material is not allowed. Research Letters may have no more than 7 authors.

**Observation**

Observations consisting of short reports of 1 or 2 complicated, unique cases should not exceed 600 words of text (not including acknowledgment, tables, figures, acknowledgments, and references) and 6 references and may include up to 2 tables or figures. Online supplementary material is not allowed. Observations may have no more than 7 authors.

If the patient(s) described in these manuscripts is identifiable, a Patient Permission form must be completed and signed by the patient(s) and submitted with the manuscript. Omitting data or making data less specific to deidentify patients is acceptable but changing any such data is not acceptable.

**Contact details for submission**

You can send your manuscript at [https://www.editorialmanager.com/repc](https://www.editorialmanager.com/repc)

**Language**

This journal is published in Portuguese and in English language. The title (and abstract and key words if applicable) must be submitted in both English and Portuguese.
Articles submitted to the Journal should be clearly written in Portuguese (from Portugal) and/or English of a good standard. Text may be edited to maintain linguistic quality and to conform with standard American English.

Submission checklist
You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

Ensure that the following items are present:
One author has been designated as the corresponding author with contact details:
• E-mail address
• Full postal address
All necessary files have been uploaded:
Manuscript:
• Include keywords
• All figures (include relevant captions)
• All tables (including titles, description, footnotes)
• Ensure all figure and table citations in the text match the files provided
• Indicate clearly if color should be used for any figures in print
Graphical Abstracts / Highlights files (where applicable)
Supplemental files (where applicable)
Further considerations
• Manuscript has been 'spell checked' and 'grammar checked'
• All references mentioned in the Reference List are cited in the text, and vice versa
• Permission has been obtained for use of copyrighted material from other sources (including the Internet)
• A competing interests statement is provided, even if the authors have no competing interests to declare
• Journal policies detailed in this guide have been reviewed
• Referee suggestions and contact details provided, based on journal requirements

For further information, visit our Support Center.

BEFORE YOU BEGIN

Ethics in publishing
Please see our information pages on Ethics in publishing and Ethical guidelines for journal publication.

Studies in humans and animals
If the work involves the use of human subjects, the author should ensure that the work described has been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans. The manuscript should be in line with the Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals and aim for the inclusion of representative human populations (sex, age and ethnicity) as per those recommendations. The terms sex and gender should be used correctly.

The privacy rights of human subjects must always be observed. A statement must be included to the effect that the study was conducted in accordance with the amended Declaration of Helsinki, that the local institutional review board or independent ethics committee approved the
protocol, and that written informed consent was obtained from all patients. The name of the
committee, the name of the chairperson of the committee (or the person who approved the
protocol), the date of approval and the approval number should follow this statement in the
Methods section. For multicenter studies, a list of the relevant approvals may be provided in a
separate document to be published as supplementary material.

All animal experiments should comply with the ARRIVE guidelines and should be carried out in
accordance with the U.K. Animals (Scientific Procedures) Act, 1986 and associated
guidelines, EU Directive 2010/63/EU for animal experiments, or the National Institutes of Health
guide for the care and use of Laboratory animals (NIH Publications No. 8023, revised 1978) and
the authors should clearly indicate in the manuscript that such guidelines have been followed.
The sex of animals must be indicated, and where appropriate, the influence (or association) of
sex on the results of the study.

Conflicts of Interest and Financial Disclosures
All authors must disclose any financial and personal relationships with other people or
organizations that could inappropriately influence (bias) their work. Examples of potential
competing interests include employment, consultancies, stock ownership, honoraria, paid
expert testimony, patent applications/registrations, and grants or other funding. A conflict of
interest may exist when an author (or the author's institution or employer) has financial or
personal relationships or affiliations that could influence (or bias) the author's decisions, work,
or manuscript. All authors are required to report potential conflicts of interest including specific
financial interests relevant to the subject of their manuscript.

Authors must disclose any interests in two places: 1. A summary declaration of interest
statement in the title page file (if double-blind) or the manuscript file (if single-blind). If there
are no interests to declare then please state this: ‘Declarations of interest: none’. This summary
statement will be ultimately published if the article is accepted. 2. Detailed disclosures as part
of a separate Declaration of Interest form, which forms part of the journal's official records. It is
important for potential interests to be declared in both places and that the information
matches. More information.

Submission declaration and verification
Submission of an article implies that the work described has not been published previously
(except in the form of an abstract or as part of a published lecture or academic thesis, see
'Multiple, redundant or concurrent publication' section of our ethics policy for more information),
that it is not under consideration for publication elsewhere, that its publication is approved by
all authors and tacitly or explicitly by the responsible authorities where the work was carried
out, and that, if accepted, it will not be published elsewhere in the same form, in English or in
any other language, including electronically without the written consent of the copyright-holder.
To verify originality, your article may be checked by the originality detection service Crossref
Similarity Check.

Authorship
Each author should have participated sufficiently in the work to take public responsibility for
appropriate portions of the content. One or more authors should take responsibility for the
integrity of the work as a whole, from inception to published article. According to the guidelines
of the International Committee of Medical Journal Editors (ICMJE), authorship credit should be
based on the following 4 criteria:
1. substantial contributions to conception or design of the work, or the acquisition, analysis, or
interpretation of data for the work; and
2. drafting of the work or revising it critically for important intellectual content; and
3. final approval of the version to be published; and
4. agreement to be accountable for all aspects of the work in ensuring that questions related to
the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Changes to authorship. Role of the corresponding author
A single corresponding author (or coauthor designee in the event that the corresponding author
is unavailable) will serve on behalf of all coauthors as the primary correspondent with the
editorial office during the submission and review process. If the manuscript is accepted, the
 corresponding author will review an edited manuscript and proof, make decisions regarding
release of information in the manuscript to the news media or federal agencies, handle all
postpublication communications and inquiries, and will be identified as the corresponding
author in the published article. The corresponding author also is responsible for ensuring that
the Acknowledgment section of the manuscript is complete and that the conflict of interest
disclosures reported of the manuscript are accurate, up-to-date, and consistent with the
information provided in each author's potential conflicts of interest section in the Authorship
Form.

Authors are expected to consider carefully the list and order of authors before submitting their
manuscript and provide the definitive list of authors at the time of the original submission. Any
addition, deletion or rearrangement of author names in the authorship list should be made only
before the manuscript has been accepted and only if approved by the journal Editor. To
request such a change, the Editor must receive the following from the corresponding author:
(a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all
authors that they agree with the addition, removal or rearrangement. In the case of addition or
removal of authors, this includes confirmation from the author being added or removed.
Only in exceptional circumstances will the Editor consider the addition, deletion or
rearrangement of authors after the manuscript has been accepted. While the Editor considers
the request, publication of the manuscript will be suspended. If the manuscript has already
been published in an online issue, any requests approved by the Editor will result in a
corrigendum.

Clinical trial results
In line with the position of the International Committee of Medical Journal Editors, the journal
will not consider results posted in the same clinical trials registry in which primary registration
resides to be prior publication if the results posted are presented in the form of a brief
structured (less than 500 words) abstract or table. However, divulging results in other
circumstances (e.g., investors' meetings) is discouraged and may jeopardise consideration of
the manuscript. Authors should fully disclose all posting in registries of results of the same or
closely related work.

Reporting clinical trials
The ICMJE defines a clinical trial as any research project that prospectively assigns human
participants to intervention or comparison groups to study the cause-and-effect relationship
between an intervention and a health outcome. Interventions include but are not limited to
drugs, surgical procedures, devices, behavioral treatments, educational programs, dietary
interventions, quality improvement interventions, process-of-care changes, and the like.

All manuscripts reporting clinical trials, including those limited to secondary exploratory or post
hoch analysis of trial outcomes, must include the following:
· CONSORT flow diagram
· Completed trial checklist
· Registry at an appropriate online public clinical trial registry
· A Data Sharing Statement to indicate if data will be shared or not. Specific questions regarding the sharing of data are included in the manuscript submission system.

Trial Registration
In concert with the ICMJE, our journal requires, as a condition of consideration for publication, registration of all trials in a public trials registry that is acceptable to the ICMJE (ie, the registry must be owned by a not-for-profit entity, be publicly accessible, and require the minimum registration data set as described by ICMJE).
Acceptable trial registries include the following and others listed at http://www.icmje.org:
anzctr.org.au
clinicaltrials.gov
isrctn.org
trialregister.nl
umin.ac.jp/ctr

Copyright
Upon acceptance of an article, authors will be asked to complete a ‘Journal Publishing Agreement’ (see more information on this). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a ‘Journal Publishing Agreement’ form or a link to the online version of this agreement.

Author rights
As an author you (or your employer or institution) have certain rights to reuse your work. More information.

Elsevier supports responsible sharing
Find out how you can share your research published in Elsevier journals.

Role of the funding source
You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the 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 article for publication. If the funding source(s) had no such involvement then this should be stated.

Open access
This is an open access journal: all articles will be immediately and permanently free for everyone to read and download. To provide open access, this journal has an open access fee (also known as an article publishing charge APC) which needs to be paid by the authors or on their behalf e.g. by their research funder or institution. Permitted third party (re)use is defined by the following Creative Commons user licenses:
Open Access
Please visit our Open Access page from the Journal Homepage for more information.

Elsevier Researcher Academy
Researcher Academy is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

Language (usage and editing services)
Please write your text in good American English. Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the English Language Editing service available from Elsevier's WebShop.

Informed consent and patient details
Studies on patients or volunteers require ethics committee approval and informed consent, which should be documented in the paper. Appropriate consents, permissions and releases must be obtained where an author wishes to include patient descriptions, photographs, video, and pedigrees of patients and any other individuals (parents or legal guardians for minors) who can be identified (including by the patients themselves) in such patient descriptions, photographs, video, and pedigrees. Written consents must be retained by the author but copies should not be provided to the journal. Only if specifically requested by the journal in exceptional circumstances (for example if a legal issue arises) the author must provide copies of the consents or evidence that such consents have been obtained. For more information, please review the Elsevier Policy on the Use of Images or Personal Information of Patients or other Individuals. Unless you have written permission from the patient (or, where applicable, the next of kin), the personal details of any patient included in any part of the article and in any supplementary materials (including all illustrations and videos) must be removed before submission.

Patient Identification
Omitting data or making data less specific to deidentify patients is acceptable, but changing any such data is not acceptable. Only those details essential for understanding and interpreting a specific case report or case series should be provided. Although the degree of specificity needed will depend on the context of what is being reported, specific ages, race/ethnicity, and other sociodemographic details should be presented only if clinically or scientifically relevant and important. Cropping of photographs to remove identifiable personal features that are not essential to the clinical message may be permitted as long as the photographs are not otherwise altered. Please do not submit masked photographs of patients. Patients' initials or other personal identifiers must not appear in an image.

Submission
Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article
for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

Submit your article
Please submit your article via https://www.editorialmanager.com/repc

Referees
Please submit the names and institutional e-mail addresses of several potential referees. For more details, visit our Support site. Note that the editor retains the sole right to decide whether or not the suggested reviewers are used.

PREPARATION

Peer review
This journal operates a rigorous single blind peer review process, in which manuscripts are sent to external reviewers selected from an extensive database. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. More information on types of peer review.

Peer reviewers will respond to the Editor within 30 days recommending acceptance, revision or rejection. The Editor will decide within 10 days whether to accept the manuscript without modification, to send the reviewers’ comments to the authors for modification, or to reject it. When modifications are proposed, the authors have 30 days (which can be extended on request) to submit a revised version of the manuscript, incorporating the comments of the reviewers and the Editor. Any amendments should be highlighted in a different colour. The Editor will decide within 10 days whether to accept the new version, reject it, or send it for further review by one or more reviewers.

Letters to the Editor and Editorials will be reviewed by the Editorial Board, but external peer review may also be requested.

Use of word processing software
It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork.
To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

Article structure
Subdivision
Divide your article into clearly defined sections. Each subsection is given a brief heading. Each heading should appear on its own separate line. Subsections should be used as much as possible when cross-referencing text: refer to the subsection by heading as opposed to simply 'the text'. Use generic names of drugs (first letter: lowercase) whenever possible. Registered trade names (first letter: uppercase) should be marked with the superscript registration symbol ® or ™ when they are first mentioned.

The Journal recommends the guidelines for publication of the EQUATOR network (http://www.equator-network.org), including the CONSORT statement and its extensions for randomized trials (http://www.consort-statement.org/), STROBE for observational (cohort, case-control and cross-sectional) studies (http://www.strobe-statement.org/), STARD for diagnostic accuracy studies (http://www.stard-statement.org/), PRISMA for systematic reviews and meta-analyses (http://www.prisma-statement.org/), SQUIRE for quality improvement studies (http://www.squire-statement.org/) and CARE for case reports (http://www.care-statement.org/). Reporting of the statistical aspects of studies should be in accordance with the Statistical Analyses and Methods in the Published Literature (SAMPL) guidelines (http://www.equator-network.org/reporting-guidelines/sampl/).

Introduction
State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

Material and methods
Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, 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.

Results
Results should be clear and concise.

Discussion
This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

Conclusions
The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

Cover letter and Essential title page information
Submission of an article must include a cover letter with the following information:

1. a brief description of the article’s significance and/or interest;
2. a declaration of originality, specifying that none of the paper’s contents have been published or are under consideration elsewhere;
3. a declaration that all authors have read and approved the manuscript;
4. a full disclosure of any potential conflict of interest for any of the authors;
5. and which manuscript type is being submitted for publication.

Title page must contain the following information:

• **Title.** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible. Preferably not exceed 12 words. It may also include a subtitle of up to 4 words. All nouns, adjectives and verbs in the title and subtitle must begin with a capital letter.

• **Author names and affiliations.** Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.

• **Corresponding author.** Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. **Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.**

• **Present/permanent address.** If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

• **Word count** of the manuscript text.

**Structured abstract**
A structured abstract, by means of appropriate headings, should provide the context or background for the research and should state its purpose, basic procedures (selection of study subjects or laboratory animals, observational and analytical methods), main findings (giving specific effect sizes and their statistical significance, if possible), and principal conclusions. It should emphasize new and important aspects of the study or observations.

Abstracts for all article types should not contain any references. Abbreviations should be avoided or kept to a minimum.

The headings will consist of: Introduction and Objectives, Methods, Results and Conclusion(s))

**Keywords**
Immediately after the abstract, provide the keywords, using British spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. Keywords should ideally be selected from the list of MeSH terms available at [www.nlm.nih.gov/mesh/](http://www.nlm.nih.gov/mesh/). These keywords will be used for indexing purposes.

**Abbreviations, Product Names and Gene Names**
Do not use abbreviations in the title or abstract and limit their use in the text. Expand all abbreviations at first mention in the text.
Ensure consistency of abbreviations throughout the article.

Do not use abbreviations in the title or abstract and limit their use in the text. Expand all abbreviations at first mention in the text.

Ensure consistency of abbreviations throughout the article.

**Names of Drugs, Devices, and Other Products**

Use nonproprietary names of drugs, devices, and other products and services, unless the specific trade name of a drug is essential to the discussion. In such cases, use the trade name once and the generic or descriptive name thereafter. Do not include trademark symbols.

**Gene Names, Symbols, and Accession Numbers**

Authors describing genes or related structures in a manuscript should include the names and official symbols provided by the US National Center for Biotechnology Information (NCBI) or the HUGO Gene Nomenclature Committee. Before submission of a research manuscript reporting on large genomic data sets (e.g., protein or DNA sequences), the data sets should be deposited in a publicly available database, such as NCBI's GenBank, and a complete accession number (and version number if appropriate) must be provided in the Methods section or Acknowledgment of the manuscript.

**Acknowledgements**

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.)

**Units of Measure**

Laboratory values are expressed using conventional units of measure, with relevant Système International (SI) conversion factors expressed secondarily (in parentheses) only at first mention. Articles that contain numerous conversion factors may list them together in a paragraph at the end of the Methods section. In tables and figures, a conversion factor to SI should be presented in the footnote or legend. The metric system is preferred for the expression of length, area, mass, and volume. For more details, see the Units of Measure conversion table on the website for the AMA Manual of Style.

**Artwork**

**Tables and Figures. Image manipulation**

Restrict tables and figures to those needed to explain and support the argument of the article and to report all outcomes identified in the Methods section. Number each table and figure and provide a descriptive title for each. Every table and figure should have an in-text citation. Verify that data are consistently reported across text, tables, figures, and supplementary material.

Whilst it is accepted that authors sometimes need to manipulate images for clarity, manipulation for purposes of deception or fraud will be seen as scientific ethical abuse and will be dealt with accordingly. For graphical images, this journal is applying the following policy: no specific feature within an image may be enhanced, obscured, moved, removed, or introduced.
Adjustments of brightness, contrast, or color balance are acceptable if and as long as they do not obscure or eliminate any information present in the original. Nonlinear adjustments (e.g. changes to gamma settings) must be disclosed in the figure legend.

**Electronic artwork**

**General points**
- Make sure you use uniform lettering and sizing of your original artwork.
- Embed the used fonts if the application provides that option.
- Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Size the illustrations close to the desired dimensions of the published version.
- Submit each illustration as a separate file.

A detailed guide on electronic artwork is available. **You are urged to visit this site; some excerpts from the detailed information are given here.**

**Formats**

If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format. Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

- EPS (or PDF): Vector drawings, embed all used fonts.
- TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.
- TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.
- TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi.

**Please do not:**
- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;
- Supply files that are too low in resolution;
- Submit graphics that are disproportionately large for the content.

**Color artwork**

Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF) or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then, at no additional charge, these figures will appear in color online (e.g., ScienceDirect and other sites) in addition to color reproduction in print. Further information on the preparation of electronic artwork.

**Figures**

Number all figures (graphs, charts, photographs, and illustrations) in the order of their citation in the text. The number of figures should be limited. Avoid complex composite or multipart figures unless justified.
See Categories of Articles for limits on the number of figures and/or tables according to article type.

Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used written out in full and in alphabetical order. Different panels in a figure should be identified by capital letters (Figure 1A, Figure 2C, Figure 3A and B, etc. in the text and (A), (B), (C-E), etc. in the captions).

**Text graphics**

Text graphics may be embedded in the text at the appropriate position. See further under Electronic artwork.

**Tables**

Include a brief title for each table (a descriptive phrase, preferably no longer than 10 to 15 words) and number all tables in the order of their citation in the text. Refer to Categories of Articles for limits on the number of tables.

Do not embed tables as images in the manuscript file or upload tables in image formats, and do not upload tables as separate files. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end.

Place any table notes below the table body. Please avoid using vertical rules and shading in table cells.

All abbreviations used in the table must be written out in full, in alphabetical order, in the table legend immediately below the table. Footnotes may be used if necessary, indicated by superscript lower-case letters (\(^a\), \(^b\), \(^c\) etc.) in the table and in the legend. Asterisks (*, **, *** etc.) may be used to indicate p values only. If a table contains a reference cited in the text, it should be cited with the name of the first author and "et al." followed by the reference number without space (e.g. Millard et al.\(^9\)).

**References**

*Citation in text. Reproduced material.*

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

**Personal Communications and Unpublished Data**

A signed statement of permission should be included from each individual identified as a source of information in a personal communication or as a source for unpublished data, and the date of communication and whether the communication was written or oral should be specified. Personal communications should not be included in the list of references but added to the text parenthetically.
Reproduced material

Please verify that all information and materials in the manuscript are original. The journal generally does not republish text, tables, figures, or other material from other publishers, except in rare circumstances. If you believe that you must include content that is owned by a third party, please let us know and provide information about all material that has been previously published and, when applicable, include author(s), title of article, title of journal or book or other publication, and complete citation, doi, and/or URL.

Reference links

Increased discoverability of research and high quality peer review are ensured by online links to the sources cited. In order to allow us to create links to abstracting and indexing services, such as Scopus, CrossRef and PubMed, please ensure that data provided in the references are correct. Please note that incorrect surnames, journal/book titles, publication year and pagination may prevent link creation. When copying references, please be careful as they may already contain errors. Use of the DOI is highly encouraged.

A DOI is guaranteed never to change, so you can use it as a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue is: Ribeiro J. Left ventricular noncompaction and Fabry disease: An unlikely association. Rev Port Cardiol. 2019. https://doi.org/10.1016/j.repc.2019.12.001. Please note the format of such citations should be in the same style as all other references in the paper.

Web references

As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

Data references

This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. This identifier will not appear in your published article.

References in a special issue

Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

Reference style

Text: Indicate references by superscript numbers in the text. The actual authors can be referred to, but the reference number(s) must always be given.

List: Number the references in the list in the order in which they appear in the text.

Examples:

Reference to a journal publication:
Reference to a journal publication with an article number:

Reference to a book:

Reference to a chapter in an edited book:

Reference to a website:

Reference to a dataset:

Note shortened form for last page number. e.g., 51–9, and that for more than 3 authors the first 6 should be listed followed by 'et al.' For further details you are referred to 'Uniform Requirements for Manuscripts submitted to Biomedical Journals' (*J Am Med Assoc* 1997;**277**:927–34)(see also [Samples of Formatted References](#)).

Journal abbreviations source
Journal names should be abbreviated according to the [PubMed list](https://www.ncbi.nlm.nih.gov/pubmed/).

**Video**
Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the file in one of our recommended file formats with a preferred maximum size of 150 MB per file, 1 GB in total. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including [ScienceDirect](https://www.sciencedirect.com). Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our [video instruction pages](https://www.elsevier.com/authors-services/video-instruction). Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

**Supplementary material**
Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material
together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

**RESEARCH DATA**

This journal encourages you to share data that supports your research publication in an appropriate data repository, and enables you to interlink the data with your published articles. If you are sharing data, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation.

Research data refers to the results of observations or experimentation that validate research findings. To facilitate reproducibility and data reuse, this journal also encourages you to share your software, code, models, algorithms, protocols, methods and other useful materials related to the project.

For more information on depositing, sharing and using research data and other relevant research materials, visit the [research data page](#).

**Mendeley Data**

This journal supports Mendeley Data, enabling you to deposit any research data (including raw and processed data, video, code, software, algorithms, protocols, and methods) associated with your manuscript in a free-to-use, open access repository. Before submitting your article, you can deposit the relevant datasets to Mendeley Data. Please include the DOI of the deposited dataset(s) in your main manuscript file. The datasets will be listed and directly accessible to readers next to your published article online.

For more information, visit the [Mendeley Data for journals page](#).

**AFTER ACCEPTANCE**

**Proofs**

One set of page proofs (as PDF files) will be sent by e-mail to the corresponding author (if we do not have an e-mail address then paper proofs will be sent by post) or, a link will be provided in the e-mail so that authors can download the files themselves. Elsevier now provides authors with PDF proofs which can be annotated; for this you will need to download the free Adobe Reader, version 9 (or higher). Instructions on how to annotate PDF files will accompany the proofs (also given online). The exact system requirements are given at the Adobe site.

If you do not wish to use the PDF annotations function, you may list the corrections (including replies to the Query Form) and return them to Elsevier in an e-mail. Please list your corrections quoting line number. If, for any reason, this is not possible, then mark the corrections and any other comments (including replies to the Query Form) on a printout of your proof and scan the pages and return via e-mail. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. We will do everything possible to get your article published quickly and accurately. It is important to ensure that all corrections are sent back to us in one communication: please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.
**Offprints**
The corresponding author will be notified and receive a link to the published version of the open access article on ScienceDirect. This link is in the form of an article DOI link which can be shared via email and social networks. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Both corresponding and co-authors may order offprints at any time via Elsevier's Webshop. Authors requiring printed copies of multiple articles may use Elsevier Webshop's 'Create Your Own Book' service to collate multiple articles within a single cover.

**AFTER PUBLICATION**

**Corrections**
Requests to publish corrections should be sent to the editorial office. Corrections are reviewed by editors and authors, published promptly, and linked online to the original article.

**Postpublication Correspondence**
For accepted manuscripts, the corresponding author will be asked to respond to letters to the editor.

**AUTHOR INQUIRIES**
Visit the Elsevier Support Center to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch. You can also check the status of your submitted article or find out when your accepted article will be published.