

# JACC: Cardiovascular Imaging Instructions for Authors

JACC: Cardiovascular Imaging publishes research articles on current and future clinical applications of noninvasive and invasive imaging techniques including echocardiography, CT, CMR, nuclear, angiography, and other novel techniques. JACC: Cardiovascular Imaging also publishes manuscripts related to basic science and molecular imaging with potential clinical applicability. It provides a forum for encouraging a lively and vigorous debate on all aspects of imaging, including imaging algorithms and the hierarchy of various imaging modalities. All manuscripts should be submitted online at <http://www.jaccsubmit-imaging.org>.

## ARTICLE TYPES

**ORIGINAL RESEARCH PAPERS.** The Editors require that manuscripts not exceed 5,000 words (including references and figure legends). Note that if you are asked to revise your paper an alternate word limit may be specified by the Editors. An outcomes expert/associate editor will review such manuscripts after provisional acceptance. If needed, the Editors will work with the authors in revising the manuscript to highlight the important features of the manuscript. Illustrations and tables should be limited to those necessary to highlight key data. Please provide gender-specific data, when appropriate, in describing outcomes of epidemiologic analyses or clinical trials; or specifically state that no gender-based differences were present. Basic science or experimental studies should have potential clinical applicability. We would prefer manuscripts that offer an algorithmic approach to the use of diagnostic modalities for the best cost-effective use in clinical medicine.

- Authors: No more than two corresponding authors; no more than two joint authors in any position.
- Abstract: Structured with the following headings and no more than 250 words: Background, Objectives, Methods, Results and Conclusions. The abstract should present essential data in 5 paragraphs. Use complete sentences. All data in the abstract also must appear in the manuscript texts or tables.
- Results: Please report all P-values to three digits after the decimal point.
- Study limitations (required): Please include the limitations of your investigation at the end of the discussion section of your manuscript.
- Figure/Table Limit: None
- Central Illustration: Required (See Manuscript Content section for more information about Central Illustrations.)
- Clinical Perspectives: Required (See Manuscript Content section for more information about Clinical Perspectives.)
- Ethical Approval (required): Please denote that your study received proper ethical oversight in both your cover letter and Methods section. For manuscripts reporting data on human subjects, note institutional review board/ethics committee approval (or formal review and exemption), including the specific name of the board or committee. For studies involving animal experiments, note that the study complied with all institutional and national requirements for the care and use of laboratory animals and, if applicable, received approval from an animal care and use committee approval. State the animal-handling protocol in your Methods.

**IREVIEWS (STATE-OF-THE-ART IN IMAGING).** Editors welcome reviews on integrated cardiovascular imaging and multi-modality imaging in an

attempt to provide the best practice guidelines for general cardiologists.

Manuscripts should be no more than 7,500 words (including text, references, and figure legends). Authors should detail in their cover letters how their submission differs from existing reviews on the subject.

- Authors: No more than two corresponding authors; no more than two joint authors in any position
- Abstract: Unstructured and no more than 150 words
- Figure Limit: None
- Table Limit: None
- Central Illustration: Required
- Highlights: Required (See Manuscript Content section for more information about Highlights.)
- Clinical Perspectives: Not applicable

Please be sure you have obtained or will obtain permission for previously published tables, figures, or any material for which you cannot grant copyright. Please contact us with suggestions before you start to prepare such review articles.

**iPIX (IMAGING VIGNETTE).** iPIX is designed to convey important concepts in cardiovascular imaging using a series of images. Typical submissions would be a series of clinical and/or basic science images—including studies in motion—that:

- a) Comprehensively illustrate a typical spectrum of important classic features or significantly novel findings;
- b) Provide unique insight into fundamental mechanisms of cardiovascular disease or pathophysiology; comprehensively illustrate major, but less well known, facets of an abnormality; or clarify a new therapy;
- c) Present hypothesis generating and/or cutting edge concepts through images;
- d) Present previously unavailable/unclear correlations between clinical imaging and pathology.

Though often presented within the context of a clinical scenario, this section is not meant to be a vehicle for case reports or a substitute for “Images in Medicine” like features. It is expected that submissions will typically involve images from a number of subjects. Only submissions that align closely with the above criteria will be processed for this section and will be subject to regular peer review.

A series of approximately 10 to 20 images should be provided. Text should consist of a title page, an introduction of 150 words, a descriptive figure legend of up to 150 words per figure, and—only if absolutely necessary—up to 3 references. Video clips can be submitted in mp4 format (see “Video Requirements”). If movies are used, they must be linked to a specific figure and be mentioned in the text.

**IMAIL (RESEARCH LETTERS).** This section is intended to highlight recent development or other important pieces of information. You may submit original reports of preliminary data and findings or studies with small numbers demonstrating the need for further investigation as Research Letters, which are published as such in the Letters to the Editor section. These can include scientific studies with brief content and results such as phase II trial results, investigator-initiated studies funded by federal or society research grants (NIH K, R grant recipients), and/or emerging investigators.

Research Letters should be  $\leq 1,000$  words (including text, references, and figure legend).

- Abstract: Not applicable
- Authors: No more than 10; no joint authorship permitted
- References: No more than 5
- Figures/Tables: No more than 1 simple figure (in no more than 2 parts) or 1 simple table
- Central Illustration: Not applicable
- Clinical Perspectives: Not applicable
- Supplemental Material: Not permitted
- Ethical Approval (required): Please denote that your study received the proper ethical oversight in both your cover letter and the body of the article. For manuscripts reporting data on human subjects, note approval from institutional review board/ethics committee (or formal review and exemption), including the specific name of the board or committee. For studies involving animal experiments, note that the study complied with all institutional and national requirements for the care and use of laboratory animals and, if applicable, received animal care and use committee approval. State the animal-handling protocol in the body of your article.

**LETTERS TO THE EDITOR AND REPLIES.** We welcome readers to submit formal comments on the content of articles published in *JACC: Cardiovascular Imaging*. Such comments should provide constructive scientific remarks. Readers may submit these comments as a Letter to the Editor within 3 months of the article's online publication date. Letters should be  $\leq 500$  words (including text and references). Replies will be solicited by the Editors and study authors will have 10 days to respond. The author's reply should be  $\leq 500$  words (including text and references) unless the author is responding to multiple letters in which case the reply should be  $\leq 800$  words (including text and references). Titles must be  $\leq 15$  words (not including the labels "To the Editor" and "Reply"). Replies to multiple letters need a title that is generic and encompasses all of the letters to which they are responding. Both letters and replies are limited to 5 authors, 5 references, and 1 table, OR 1 figure in 1 or 2 panels. Please include the cited article as the first reference.

**EDITORIAL COMMENTS AND EDITORIAL VIEWPOINTS.** Most manuscripts in every issue will be accompanied by editorial comments.

Although usually invited, succinct opinion pieces will also be considered for *JACC: Cardiovascular Imaging*. If you are invited to write an editorial, specific requirements will be sent to you. Papers should be  $\leq 1,500$  words (including text, references, and figure legends) and must include the cited article as a reference. In some cases, a table or figure may be helpful and appropriate.

## MANUSCRIPT ORGANIZATION

1. Cover Letter (not required for Editorial Comments)
2. Rebuttal Letter (revision or appeal only)
3. Manuscript File
  - a) Title Page with title ( $\leq 15$  words), author names, author affiliations, author/funding disclosures, running title ( $\leq 7$  words), corresponding author contact information (including mailing address, phone, fax, and email address), and word count (beginning with text and ending with the last figure legend; not including tables)
  - b) Abstract (Structured Abstract of  $\leq 250$  words for Original Research Papers, Unstructured Abstract of  $\leq 150$  words); Clinical Trial Registration (if applicable); Key Words, 3-6; Abbreviations List,  $\leq 10$  Abbreviations

- c) Text
  - d) Clinical Perspectives (core clinical competencies and translational outlook implications on a separate page after the conclusions, and only for Original Research Papers)
  - e) Acknowledgments (if appropriate)
  - f) References
  - g) Figure Titles and Legends
  - h) Tables (each on a separate page)
4. Figures/Central Illustration
  5. Supplemental Material (uploaded as one single Microsoft Word document containing all supplemental figures and tables)

## FORMATTING

Please use Times New Roman 12-point font with 1-inch margins. The Title Page, Abstract(s), Key Words, and Abbreviations should be single-spaced. The remaining text should be double-spaced. Page numbering should begin with the Title Page.

## MANUSCRIPT CONTENT

**COVER LETTER.** A short paragraph telling the editors why the authors think their paper merits publication may be included in the cover letter. Potential reviewers may be suggested in the cover letter, as well as reviewers to avoid. However, final reviewer assignment is determined by the editors. The corresponding author should be specified in the cover letter and on the title page. All editorial communications and submission queries will be sent to this author. Cover letters must include the following 4 ICJME Statements:

1. The paper is not under consideration elsewhere;
2. None of the paper's contents have been previously published;
3. All authors have read and approved the manuscript;
4. The full disclosure of any potential conflict of interest (see "Relationship with Industry Policy") or that no such relationship exists. Exceptions must be explained. If there is no conflict of interest, this should also be stated in the cover letter.
5. Ethical Approval (required): Please denote that your study received the proper ethical oversight in both your cover letter and the body of the article. For manuscripts reporting data on human subjects, note institutional review board/ethics committee approval (or formal review and exemption), including the specific name of the board or committee. For studies involving animal experiments, note that the study complied with all institutional and national requirements for the care and use of laboratory animals and, if applicable, received approval from animal care and use committee. State the animal-handling protocol in the body of your research correspondence or the Methods section of your manuscript.

**TITLE PAGE.** Include the full title (no more than 15 words), authors' names (full given name, middle initial, and surname), degree, total word count, and a running title of 7 words. List the departments and institutions with which the authors are affiliated, and indicate the specific affiliations if the work is generated from more than one institution (use superscript letters <sup>a, b, c, d</sup>, and so on). Provide information on clinical trials, grants, contracts, and other forms of financial support, and list the cities and states of all foundations, funds and institutions involved in the work. This must include the full disclosure of any relationship with industry (see "Relationship with Industry Policy"). If there are no relationships with industry, this should be stated. Corresponding author contact information: Under the heading, "Address for Correspondence," provide the full name and complete postal address of the author to whom communications should be sent. Also provide telephone

and fax numbers, an email address, and a Twitter handle, if available. Please also provide a short tweet summarizing your paper to your title page. The tweet should be approximately 280 characters, including spaces. Please include up to three hashtags with your tweet (Example: #ACCIntl, #ACCFIT, #WomenInCardiology, #CVD, #Heart-Failure). You may also review our [hashtag guide](#). Please note that the editors will review your content, and it may not ultimately be published on the @JACCJournals Twitter account. The corresponding author will be the sole contact for all submission queries.

**Word Count:** Word count should include text, references, and figure legends.

**ABSTRACT.** Provide a structured abstract of no more than 250 words for Original Research Papers, presenting essential data in 5 paragraphs introduced by separate headings in the following order: Background, Objectives, Methods, Results, Conclusions. All data in the abstract also must appear in the manuscript text or tables. For general information on preparing structured abstracts, see “Haynes RB, Mulrow CD, Huth EJ, Altman DG, Gardner MJ. More informative abstracts revisited. *Ann Intern Med.* 1990;113:69-76.” An unstructured 150-word abstract should be provided for State-of-the-Art Reviews.

**KEY WORDS.** Immediately after the abstract, provide a maximum of 6 key words, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, ‘and’, ‘of’). These key words will be used for indexing purposes, and therefore should be different than the terms/words already used in the title of the paper.

**ABBREVIATIONS.** The abbreviations of common terms (e.g., ECG, PTCA, CABG) or acronyms (GUSTO, SOLVD, TIMI) may be used in the manuscript. On a separate page following the Abstract, list the selected abbreviations and their definitions (e.g., TEE = transesophageal echocardiography). The Editors may determine which lesser-known terms should not be abbreviated. Please consult “Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals (ICMJE Recommendations),” available from [www.icmje.org](http://www.icmje.org) for appropriate use of units of measure.

**TEXT.** All text from the Introduction to the end of the manuscript should be double-spaced. Page numbering should start with the Title Page. The text for Original Research Papers should be structured as Introduction, Methods, Results, Discussion, and Conclusions. Use headings and subheadings in the Methods, Results, and particularly, Discussion sections. Every reference, figure, and table should be cited in the text in numerical order according to order of mention. All supplemental figures, tables, and appendices should also be cited in the text.

**STATISTICS.** All publishable manuscripts will be reviewed for appropriateness and accuracy of statistical methods and statistical interpretation of results. We subscribe to the statistics section of the “Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals (ICMJE Recommendations),” available at [www.icmje.org](http://www.icmje.org). In the Methods section, please provide a subsection detailing the statistical methods, including specific methods used to summarize the data, methods used for hypothesis testing (if appropriate), and the level of significance used for hypothesis testing. When using more sophisticated statistical methods (beyond t-tests, chi-square, or simple linear regression), specify the statistical package, version number, and nondefault options used. For more information on statistical review, see “Glantz SA. It is all in the numbers. *J Am Coll Cardiol.* 1993;21:835-7.”

**MACHINE LEARNING CHECKLIST.** To improve the transparency of reporting and the reproducibility of machine-learning algorithms, authors of research articles that have used machine-learning techniques must provide a completed checklist that will be made available to editors and reviewers during

the manuscript assessment. A statement for the checklist or scientific justification for any variations from recommended algorithmic steps [see Sen-gupta PP, Shrestha S, Berthon B, et al. Proposed Requirements for Cardiovascular Imaging-Related Machine Learning Evaluation (PRIME): A Checklist: Reviewed by the American College of Cardiology Healthcare Innovation Council. *J Am Coll Cardiol Img.* 2020;13:2017-2035. <https://www.jacc.org/doi/10.1016/j.jcmg.2020.07.015>.] should be included in the manuscript. This machine-learning reporting summary and checklist will be published with all accepted manuscripts as online supplementary information.

**CLINICAL PERSPECTIVES.** These are for Original Research Papers only. The authors should delineate clinical implications and translational outlook recommendations for their manuscripts. These should be listed in the manuscript after the Text and before the Acknowledgments and References. The competencies describe the implications of the study for current practice. The translational outlook identifies the potential barriers to clinical translation, emphasizing directions for additional research.

**Clinical Competencies.** Competency-based learning in cardiovascular medicine addresses the 6 domains promulgated by the Accreditation Council on Graduate Medical Education (ACGME) and endorsed by the American Board of Internal Medicine (Medical Knowledge, Patient Care and Procedural Skills, Interpersonal and Communication Skills, Systems-Based Practice, Practice-Based Learning, and Professionalism) ([www.acgme.org/acgmeweb](http://www.acgme.org/acgmeweb)). The ACCF has adopted this format for its competency and training statements, career milestones, lifelong learning, and educational programs. The ACCF also has developed tools to assist physicians in assessing, enhancing, and documenting these competencies ([www.acc.org/education-and-meetings/products-and-resources/competencies](http://www.acc.org/education-and-meetings/products-and-resources/competencies)).

Authors are asked to consider the clinical implications of their report and identify applications in one or more of these competency domains that could be used by clinician readers to enhance their competency as professional caregivers. This applies not only to physicians in training, but to the sustained commitment to education and continuous improvement across the span of their professional careers.

**Translational Outlook.** Translating biomedical research from the laboratory bench, clinical trials or global observations to the care of individual patients can expedite discovery of new diagnostic tools and treatments through multidisciplinary collaboration. Effective translational medicine facilitates implementation of evolving strategies for prevention and treatment of disease in the community. The Institute of Medicine identified two areas in need of improvement: testing basic research findings in properly designed clinical trials and, once the safety and efficacy of an intervention has been confirmed, more efficiently promulgating its adoption into standard practice (Sung NS, Crowley WF, Genel M. The meaning of translational research and why it matters. *JAMA.* 2008;299:3140-3148).

The National Institutes of Health (NIH) has recognized the importance of translational biomedical research, emphasizing multifunctional collaborations between researchers and clinicians to leverage new technology and accelerate the delivery of new therapies to patients ([www.ncats.nih.gov/about](http://www.ncats.nih.gov/about)).

Authors are asked to position their work in the context of the scientific continuum, by identifying impediments and challenges requiring further investigation and anticipating next steps and directions for future research.

**HIGHLIGHTS.** These are for State-of-the-Art Reviews.

Please provide a list of 3-4 brief (of no more than 15 words each) bullet points that highlight the main messages of the review. The first bullet should provide the translational/clinical context or background that establishes the relevance or need for this review. The second bullet should speak to the

main message and focus of the review, including any recommendations made by the authors. The final bullet should summarize where the field needs to move forward from this point. Example:

- Cardiovascular aging leads to a progressive decline in function and structure.
- Calorie reduction and adjusted diurnal rhythm of feeding may help to prevent cardiovascular disease.
- Lowered intake of protein and nutritional modulation of the gut microbiome can be cardioprotective.
- Regular exercise, stress-reduction programs, and calorie-restriction mimetic medications can impact a healthy diet.

**ACKNOWLEDGEMENTS.** Acknowledgments should contain 100 words or less. Signed letters of permission from all individuals listed in the acknowledgments must be submitted to *JACC: Cardiovascular Imaging*.

#### REFERENCES

- Identify references in the text with superscript numerals. Do not use EndNote.
- The reference list should be double-spaced on pages separate from the text; references must be numbered consecutively in the order in which they are mentioned in the text. List all authors if 6 or fewer, otherwise list the first 3 and add “et al.” Do not use periods after author initials.
- Do not cite personal communications, manuscripts in preparation, or other unpublished data in the references; these may be cited in the text in parentheses. Do not cite abstracts that are older than 2 years. Identify abstracts by the abbreviation “abstr” in parentheses. If letters to the editor are cited, identify them with the word “letter” in parentheses. Websites must be cited as references (i.e., any URLs cited in the text or tables must be included as references rather than in the text or table).
- Use Index Medicus (National Library of Medicine) abbreviations for journal titles. It is important to note that when citing an article from *JACC: Cardiovascular Imaging*, the correct citation format is *J Am Coll Cardiol* *Img*.
- Use the following style and punctuation for references:
  - Periodical. Do not use periods after the authors’ initials. Please provide all page numbers: EXAMPLE: “5. Glantz SA. It is all in the numbers. *J Am Coll Cardiol*. 1993;21:835-837.”
  - DOI-based citation for an article in press.
    - If the ahead-of-print date is known, please provide. EXAMPLE: “16. Winchester D, Wen X, Xie L, et al. Evidence for preprocedural statin therapy: meta-analysis of randomized trials. *J Am Coll Cardiol*. 2010. <https://doi.org/10.1016/j.jacc.2010.09.028>.”
    - If the ahead-of-print date is unknown, please omit. EXAMPLE: “16. Winchester D, Wen X, Xie L, et al. Evidence for pre-procedural statin therapy: meta-analysis of randomized trials. *J Am Coll Cardiol*. <https://doi.org/10.1016/j.jacc.2010.09.028>.”
  - Chapter in book. Provide author(s), chapter title, editor(s), book title, publisher location, publisher name, year, and inclusive page numbers. EXAMPLE: “27. Meidell RS, Gerard RD, Sambrook JF. Molecular biology of thrombolytic agents. In: Roberts R, editor. *Molecular Basis of Cardiology*. Cambridge, MA: Blackwell Scientific Publications, 1993:295-324.”
  - Book (personal author or authors). Provide a specific (not inclusive) page number. EXAMPLE: “23. Cohn PF. *Silent*

*Myocardial Ischemia and Infarction*. 3rd edition. New York, NY: Marcel Dekker, 1993:33.”

- Online media. Provide specific URL address and date information was accessed. EXAMPLE: “10. Henkel J. Testicular Cancer: Survival High With Early Treatment. FDA Consumer magazine [serial online]. January-February 1996. Accessed August 31, 1998. [http://www.fda.gov/fdac/features/196\\_test.html](http://www.fda.gov/fdac/features/196_test.html).”
- Material presented at a meeting but not published. Provide authors, presentation title, full meeting title, meeting dates, and meeting location. EXAMPLE: “20. Eisenberg J. Market forces and physician workforce reform: why they may not work. Paper presented at: Annual Meeting of the Association of Medical Colleges; October 28, 1995; Washington, DC.”

**AMA Manual of Style.** The *JACC Journals* follow the *AMA Manual of Style* with minor modifications. This guide provides guidance on usage, including but not limited to sociodemographic descriptors and nomenclature. For more detailed information on what’s new in the 11th edition, see the slide set here: <https://www.amamanualofstyle.com/page/aboutAMAMOS11>.

#### FIGURES

- All figures must have a number, title, and caption.
- TIF figures are preferred.
- Typeset figures should be no smaller than 7 inches wide.
- Lettering should be of sufficient size to be legible after reduction for publication; the optimal size is 12 points but should be no less than 10 points. Symbols should be of a similar size.
- Color and gray scale images must be at least 300 DPI. Line art should be at least 1200 DPI.
- All abbreviations used in the figure should be identified in an alphabetical order at the end of each legend.
- All symbols used (arrows, circles, etc.) must be explained.
- Figure numbers must correspond with the order in which they are mentioned in the text.
- If previously published figures are used, written permission from the original publisher (or copyright holder, if not the publisher) is required. See STM Guidelines for details: <https://www.stm-assoc.org/intellectual-property/permissions/permissions-guidelines/>.
- If the figure has been previously published, cite the figure source in the legend.
- Do not include trial logos in figures.

Decimals, lines, and other details must be strong enough for reproduction. Use only black and white—not gray—in charts and graphs. Place crop marks on photomicrographs to show only the essential field. Designate special features with arrows. All symbols, arrows, and lettering on half-tone illustrations must contrast with the background. There is no fee for the publication of color figures. Our editors encourage authors to submit figures in color, as we feel it improves the clarity and visual impact of the images.

**FIGURE LEGENDS.** Figure legends should be an in-depth explanation of each figure, including a figure TITLE and a CAPTION that includes the purpose of the figure, and brief method, results, and discussion statements pertaining to the figure. All abbreviations used in the figure should be identified either after their first mention in the legend or in alphabetical order at the end of each legend. All symbols used (arrows, circles, etc.) must be explained. **Target length should be 50-100 words**

per figure, with the title no more than 10 words. Legends should not exceed 150 words.

- All figures must have a number, title, and caption.
- Figure legends should be double-spaced on pages separate from the text.
- Figures should be cited in numerical order in the text with each figure called out individually, rather than using a range (for instance, Figures 1, 2, and 3, rather than Figures 1-3). Supplemental figures should be cited as “Supplemental Figure 1, Supplemental Figure 2,” etc.
- Figure titles should be short and followed by a 2- to 3-sentence caption.
- Your Central Illustration should be listed last.
- If the figure has been previously published, cite the figure source in the legend.

**CENTRAL ILLUSTRATION.** All Original Research Papers and State-of-the-Art Reviews must develop at least 1 Central Illustration (that may be a hand-drawn figure), which summarizes the entire manuscript or at least a major section of the manuscript. Our in-house medical illustrators will create the final printable versions of these figures in consultation with the authors and the editors. The purpose of these illustrations is to provide a snapshot of your paper in a single visual, conceptual manner. Trial logos should not appear in Central Illustrations. The illustration should be labeled as “Central Illustration,” rather than as a numbered figure, and it must not duplicate content from other figures in the manuscript. This illustration must be called out in the body of the article. It must be accompanied by a legend (title and caption). The Central Illustration legend should be listed last in your list of figure legends. The Central Illustration must be an original image and, for copyright reasons, cannot be adapted or reprinted from another source. For best practices on creating Central Illustrations, please see *The Art and Challenge of Crafting a Central Illustration or Visual Abstract* at <https://www.jacc.org/doi/full/10.1016/j.jacc.2019.10.035>.

**TABLES.** Each table should be on a separate page, with the table number and title centered above the table and explanatory notes below the table. Use Arabic numbers. Table numbers must correspond with the order cited in the text. Tables should be self-explanatory, and the data presented in them should not be duplicated in the text or figures.

- All tables must have a title of up to 15 words.
- Each table may include a caption of up to 100 words. Abbreviations, which do not count toward the caption word limit, should be listed in a footnote under the table in alphabetical order.
- Footnote symbols should use lowercase, superscript letters, in alphabetical order: <sup>a</sup>, <sup>b</sup>, <sup>c</sup>, etc.
- If previously published tables are used, written permission from the original publisher (or copyright holder, if not the publisher) is required.
- Cite the source of the table in the footnote.

**SUPPLEMENTAL MATERIAL.** Authors may submit supplemental material to accompany their article. The supplemental material should be essential to the understanding and interpretation of the primary manuscript and should contain original content that has not been previously published. The supplemental material will be posted online at the same time of publication of the article.

Please upload all supplemental materials, with the exception of videos and large data sets (see below), as one separately uploaded Word document that is labeled “Supplemental Appendix.” The pages of the Supplemental Appendix should be numbered consecutively. The first page of the

Supplemental Appendix should list the title and page number of each element included in the document.

The Supplemental Appendix document may include the following elements:

- Supplemental methods
- Supplemental results
- Supplemental tables (e.g., Supplemental Table 1, Supplemental Table 2)
- Supplemental figures with accompanying figure legends (e.g., Supplemental Figure 1, Supplemental Figure 2)
- All references that are cited within supplemental material should be placed in a separate reference section that is at the end of the supplemental material. The references should be formatted just as in the main manuscript and numbered and cited consecutively in the Supplemental Appendix.

All supplemental material will undergo editorial and peer review at the same time as the main manuscript is being evaluated. **Once the manuscript is accepted for final publication, the content of the supplemental material cannot be changed.**

**Large Data Sets.** Large data sets for gene expression microarrays, SNP arrays, proteomics data, and high-throughput sequencing studies should be deposited in a public data repository (1,2). Microarray data must be deposited in a public database that is compliant with Minimum Information About a Microarray Experiment (MIAME) guidelines (e.g., GEO). High-throughput sequencing data must be deposited in a public database that is compliant with Minimum Information About a Next-generation Sequencing Experiment (MINSEQE) guidelines. For proteomics data, the ProteomeXchange Consortium (<http://www.proteomexchange.org/>) provides data submission and dissemination pipelines involving the main proteomics repositories, including PRIDE, PeptideAtlas, MAssIVE, iProX, and Panorma Public. Please provide the relevant accession numbers in the text of the main manuscript.

1. Wheeler DL, Barrett T, Benson DA, et al. Database resources of the National Center for Biotechnology Information. *Nucleic Acids Res.* 2007;35:D5-12.
2. Edgar R, Barrett T. NCBI GEO standards and services for microarray data. *Nat Biotechnol.* 2006;24:1471-2.

**VIDEO REQUIREMENTS.** Inclusion of videos in the published paper is at the discretion of the Editors:

1. Video submissions for viewing online should be submitted as MP4 files only. The Journal office will not accept any other file formats. Please refer to the guidelines below on quality checking the videos before submission:

You can use any video conversion tool that supports MP4 format with codec setting for H.264 (x264). In some tools, it may also be known as MPEG-4 Part 10 or H.264/AVC. This format provides an excellent quality, performance, and file size. It is also widely supported by media players, including mobile devices.

An example of a free open-source tool is HandBrake (<https://handbrake.fr/docs/en/latest/table-of-contents.html>). Please note that troubleshooting videos for various other tools is beyond the scope of this document or JACC staff.

2. Videos should be no larger than 15 MB. Larger videos will require longer download times and may have difficulty playing online. Videos should be restricted to the most critical aspects of your research. A longer procedure can be restructured as several shorter videos (each no more than 3 minutes) and submitted in that form.

3. A video legends page giving a brief description of the content of each video must be included in the manuscript. Please list the video legends page *immediately after* the figure legends page in the manuscript. When submitting the manuscript to the submission site, please do not upload the video legends page as a supplemental file. Please note that ALL videos must be linked to figures or panels of a figure(s). If there are individual video panels (e.g., Video 1A, Video 1B, etc.), a legend for each panel must be provided. Videos can either be cited in the manuscript's text or in a figure legend. See examples below:

a. Video referenced in manuscript text:

We used cardiac magnetic resonance and computed tomographic imaging to characterize the anatomic variability of our patients with SVDs (Figures 1, 2, 3, 4, 5, and 6, Videos 1, 2, 3, and 4).

b. Video referenced in figure legend:

**Figure 1. Covered Stent Placement for Closure of a Sinus Venosus Defect.** (A) A covered stent that is expected to successfully close the sinus venosus defect. (B) An unsuccessful case due to blockage of a large anomalous pulmonary vein (aPV). The virtual covered stent (pink) is placed in the superior vena cava (SVC) and shown in an anterior view, with most of the heart cut away for clarity. **Videos 1, 2, 3, and 4** show the library of stents, measuring the SVC and aPVs in virtual reality space, initial stent sizing, and verification of successful stent placement, respectively, for patient A.

c. Video legend page:

Video 1. Library of stents used for virtual stenting.  
Video 2. Measurements of SVC and aPV in VR space.  
Video 3. Initial stent sizing process.  
Video 4. Verification of successful stent placement.

4. Videos should be cited in numerical order in the text with each video called out individually, rather than using a range (for instance, Videos 1, 2, and 3, rather than Videos 1-3). Videos should be cited as "Video 1, Video 2," etc.

## EDITORIAL POLICIES

All manuscripts must be submitted online at <https://www.jaccsubmit-imaging.org>. By submitting an article to the Journal, all authors of the submission agree to receive emails from all the American College of Cardiology's JACC Journals regarding the manuscript, including editorial queries while the manuscript is under review and emails from the publisher should the paper be accepted for publication. The contact information provided by the corresponding author will be included in the galley proofs, the published PDF version of the manuscript, and the online version of the manuscript.

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