



Editors' notebook: figures, tables, appendices, and supplementary material

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Figures, tables, appendices, and supplementary material clarify, enhance or expound upon what is presented in the manuscript text.

All figures and tables must be additive to what appears in text. Figures and tables which replicate material in text or replicate each other are superfluous. Figures and tables which bear limited and straightforward information are better omitted in deference to presenting the material succinctly in text form.

Figures and tables should not be embedded in the main manuscript text. Upload figures as separate image files in the order in which they are cited. Tables may be combined into one file or uploaded as separate files in the order in which they are cited.

Figures

Figures visually display information that would either be difficult for authors to explain or for readers to understand if presented in text form. Figures may also better represent

methods or results than text description of the same. Figures may be in the form of radiologic images (e.g., radiographs, CT images, etc.), digitized material (e.g., scanned histopathology slides), medical photographs (e.g., ophthalmologic or dermatologic images), non-medical photographs (e.g., a photograph of a CT scanner, a patient or a waiting room), graphs, diagrams, flowcharts, or drawings/artwork.

Pediatric Radiology prides itself on the quality of the figures contained within and strives for optimization of such. In the words of former editor, Tom Slovis, the pictures “should jump out at you.”

All radiologic images, digitized material, and photographs should be submitted with resolution of 300 dpi or higher at a minimum of one column width (84 mm), with adequate contrast and brightness to demonstrate the salient feature(s) and should be cropped to highlight the key findings without extra space or extraneous content. Images should be judiciously annotated with arrows, arrowheads, letters, or other simple symbols that do not obscure the finding(s) of interest. For consistency, all such annotations must be black and/or white and no other color (including gray). Black versus white arrows should be selected to maximally contrast at the specific location in the image. A surrounding stroke of the contrasting color (e.g., white around a black arrow) can increase visibility. Simple arrow style is best without flaring. By definition, arrowheads have no tail, not even a tiny one. Annotations must be the same style throughout a manuscript. If letters or numbers are used in annotation, a sans serif font should be used such as Helvetica or Arial. Ideally, the same annotation is used for the same finding on each illustration.

Authors are encouraged *not* to put figure numbers or figure part labels on images. The publisher will add these labels using standard journal formatting.

All graphs, diagrams, flowcharts, and other artwork must be submitted at 1200 dpi at a minimum of one column width for optimal reproduction in print without blurring. Authors should note that lower resolution files cannot simply be converted to higher resolution 1200 dpi images; rather, they must return to the source program and re-create the file.

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Graphs and flowcharts can be presented in color; however, authors should choose colors carefully so that the end product is visually pleasing, professional in appearance, and easy to interpret. Use muted colors for graphs and flowcharts and different shades of the same rather than multiple different colors. When colors are used, as much as possible, they should be consistent throughout all figures. Most graphs and flowcharts are best in simple black and white.

The horizontal and vertical axes of graphs need to be labeled (only the first letter of the first word capitalized) and include the unit(s) of measure. Legends are included to explain features of a graph, when appropriate. Labels and legends of graphs should use a sans serif font such as Helvetica or Arial. Graphs should not have embedded titles.

Images should not be submitted as composites. Each individual image is submitted as a separate figure part and image file, with the appropriate file name (e.g., Fig. 1a, Fig. 1b, etc.). Rare exceptions where composites are acceptable include temporal sequences of nuclear medicine images, side-by-side simultaneously acquired grayscale, and contrast-enhanced ultrasound images and occasional artwork.

Figures are numbered in sequence of appearance within the text. By convention, in *Pediatric Radiology*, we only call out the figure (i.e., Fig. 3) and not the figure part (i.e., Fig. 3a). Any citation first appearing in a figure or figure legend (rather than in the manuscript text) is called out in sequence after the immediately preceding citation within the text before the figure callout. For example, if Fig. 1 is called out in the manuscript between text first citing [15] and later citing [16], a new citation in Fig. 1 should be [16] and the next newly called out citation in the text should be [17] rather than [16]. If a figure calls out citations, include the citations called out by the figure legend within brackets both within the legend and at the end of the text sentence calling out the figure.

Figure legends must contain adequate detail and description. State what is being illustrated and describe it so that the reader will understand what is being presented and the purpose of the figure. As a rule, a reader should be able to look at the figure, read the legend, and understand what is being presented without having to refer to the text—imagine a reader thumbing through the journal and looking at illustrations of interest.

Multipart figure legends should start with a general title and then describe each figure part. Each figure part needs to be explained and differentiated. Only include subparts that show distinct features from each other. All annotations and abbreviations on every image need to be defined in the figure legend, both those added and those appearing as part of the image. Annotations called out in figure legends should be in italic font.

For example:

Fig. 3 Wilms tumor in a 3-year-old boy. **a** Anteroposterior radiograph shows a mass in the left upper abdomen (*arrow*)... **b** Sagittal ultrasound image shows a hypoechoic mass (*arrowhead*)... **c** Axial contrast-enhanced T1-weighted MR image shows..

The use of abbreviations in figure legends should follow journal guidelines and be consistent with abbreviations used in text, acknowledging that some additional abbreviations may be necessary for unobtrusive labeling of images [1]. The age and sex/gender of every illustrated patient must be included. We prefer “girl” or “boy” to “female” or “male.” Imaging plane or projection must be stated for each figure part—we find that this is often omitted for ultrasound, fluoroscopy images, interventional radiology, and volume-rendered CT or MR reformats. Where contrast was administered, this should be noted in the figure legend. The imaging sequence must be included for all MR images, noting that terms such as “contrast-enhanced” and “MR angiography” are not sequence names.

Images which are reproduced from a prior publication require permission from the publisher of the previous publication with appropriate acknowledgment of permission and the source of the reproduced image.

Ideally, each figure only contains images from a single patient as inclusion of multiple patients in a single figure tends to confuse the reader. There are rare exceptions to this, such as the illustration of classification or scoring schemes that require images from multiple different patients, or perhaps a sequence of patients demonstrating disease progression or comparing a patient with a condition to an age- and sex-matched control.

Tables

Tables summarize complex (or extensive) numerical data so that the reader can readily grasp and retrieve the information—a long list of numbers in text is hard to understand and detracts from the quality of the paper. Tables serve to organize the presentation of data or material. Tables should not contain extraneous data which does not contribute to the objective of the paper and should not contain data that was not described as being collected in the methods. Tables should be clearly organized with column and row headings. Ratios (i.e., sensitivity, specificity, accuracy, negative and positive predictive values) should be presented with numerator, denominator and percentage. Confidence intervals should be provided for all results except simple frequencies. Formatting of numbers should be consistent. Excessive

digits after a decimal point should be avoided – rarely should numbers be given to more than two digits after the decimal point. The decimal point should be a period/full stop and not a comma (e.g., 25.5 not 25,5).

Tables must be submitted in editable text format (i.e., a .docx file) and not as image files. Tables must be in black text font and cells should not be shaded or colored. Bold and/or italicized text can be used to highlight entries (e.g., data points reaching statistical significance). Lettered superscripts (^a, ^b, ^c ...) are used to call out footnotes explaining aspects of the table. The superscripts are applied in alphabetical order within the table from top down and left to right. Asterisks and other symbols should not be substituted for lettered superscripts.

Tables have a title line which should be relatively concise. Tables do not have a legend. Rather, detailed information explaining the table, if necessary, is placed in the table footer. Tables do not have parts (i.e., there can be no Table 1A and Table 1B). Rather, each table is a separate numbered table.

All abbreviations within a table must be defined in the table title, in the table itself at first use, or in a footer. The list of abbreviations in the table footer is alphabetized. In general, abbreviations in a table should follow journal guidelines and should be the same abbreviations used in the text, not additional abbreviations [1]. Rarely, exceptions to this are made for spatial/layout efficiency.

Similar to figures, any citation first appearing in a table (rather than in the manuscript text) is called out in sequence after the immediately preceding citation within the text before the table callout. For example, if Table 3 is called out in the manuscript between text first citing [23] and later text citing [24], a new citation in Table 3 should be [24] and the next newly called out citation in the text should be [25] rather than [24]. Within a table, newly called out citations should be in numerical order from top down and left to right. If a table calls out citations, include the citations called out with the table within brackets at the end of the text sentence calling out the table.

Tables do not contain images. Graphs are not tables.

Appendices

Appendices contain relatively concise material for reader reference that can be placed outside the main part of the manuscript for ease of access to avoid cluttering of the main text. Appendices appear as part of the manuscript at the end, after the reference list. Images or other visual material (graphs, flowcharts) are not to be used as

appendices. Appendices should be called out: Appendix 1, Appendix 2, etc. and not labeled as figures or tables which would be duplicative and confusing. In general, the use of appendices is minimized or avoided and reserved for relatively short material. An example of proper use of an appendix might be the derivation of a mathematical formula or a previously published classification system that is central to the manuscript. Similar to figures and tables, citations first called out in an appendix follow in order after the last citation called out before the appendix was called out and be noted within brackets at the end of the sentence where the appendix is called out.

Supplementary material

Supplementary material serves two functions. First, voluminous, cumbersome, or large format material that would not be appropriate to appear within the main manuscript can be placed in supplementary material for reader access. Second, alternative forms of media, namely videos, may appear as supplementary material. With the advancement of imaging technology, the increased use of supplementary material for videos is strongly encouraged. Examples of supplementary material include a copy of an administered survey (a requirement of any article involving use of a survey), large or lengthy tables of data, additional illustrations, particularly if multipart, non-essential data to reader understanding of articles (i.e., plots for a meta-analysis), and videos of imaging studies with motion (e.g., ultrasound, fluoroscopy, interventional radiology, cardiac MR, rotating or fly-through volume-rendered reformats). Regardless of format (table, survey, image, video), supplementary material should be called out as follows: Supplementary material 1, Supplementary material 2, etc. Formatting rules for supplementary material are the same as for material appearing in the published article. It should be noted, however, that supplementary material, due to its nature and volume, is not copy-edited in detail by journal staff. Images and videos appearing as supplementary material require legends, following the journal's guidelines for such. Care must be taken to avoid disclosure of protected health information in supplementary material. References cited within supplementary material are included within the supplementary material itself rather than cited from the reference list of the main manuscript.

The published article will contain direct links to each supplementary material item. This material is maintained in perpetuity by the journal publisher.

Conclusion

In summary, figures, tables, appendices, and supplementary material are all at the authors' disposal to enhance their publications. Each of these formats serves to efficiently enhance the delivery of information to the reader. Figures containing high-quality images are integral to an imaging journal. Judicious annotation and well-crafted, descriptive, helpful legends optimize the utility of figures to readers. Well-organized tables serve to summarize and organize complex data. Appendices, though uncommonly used, provide the opportunity to quickly explain or define something for the reader without cluttering the text. Finally, supplementary material provides unlimited space for material pertinent to a paper but impractical to include within the paper.

Declarations

Conflicts of interest None

Reference

1. Strouse PJ, Trout AT, Khanna G, Offiah AC (2023) Editors' notebook: abbreviations. *Pediatr Radiol*. <https://doi.org/10.1007/s00247-023-05627-4>

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