Why References*

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References may be the least noticed aspect of a scientific manuscript, but their proper use brings authority, credibility, and precision to scientific manuscripts. The reference section is an important part of a scientific manuscript because references acknowledge the work of other researchers that allowed you to formulate your hypothesis and enable readers of your article to locate those works. At some point, another researcher may reference your article, which allows the field to grow. I briefly discussed references in a previous article and noted the use of a plethora of references and the failure to cite the work of others as the most common problems.

The “Instructions to Authors” for CHEST refer authors to the American Medical Association Manual of Style for guidance on formatting references. The manual, which is scheduled for an updated version in 2007, is quite comprehensive and devotes >20 pages to the topic. It provides guidance on how to reference everything from journal articles and book chapters to Web-based references, foreign language journals with only abstracts in English, editorials, and legal briefs. While I will specifically address the use of references in original reports, many of the comments are applicable also to review articles, book chapters, and other scientific documents.

Potential Problems

Potential problems with references can be divided into three major categories:

- Selection of references;
- Placement of reference citations; and
- Accuracy of references.

Selection

Because science is cumulative, that is, research builds on previous research, it is important that authors select references that are accessible to other scientists. A convincing argument could advocate peer-reviewed journal articles as the best and only references that should be cited because they have survived the scrutiny of peer review and are available through print and electronic media. Unfortunately, not all information is available in peer-reviewed articles, so the author may need to rely on other sources, such as book chapters, newspaper articles, or government records.

The use of meeting abstracts as references presents an interesting situation. I am not fond of research papers that cite meeting abstracts, particularly abstracts that are several years old. Meeting abstracts often contain preliminary and rudimentary information and may not provide enough details to allow full understanding of the data. If the data from a meeting abstract have not been published as a full research article within 3 years of the meeting abstract, I am always wary of the quality of the data (i.e., were the data sufficiently robust for a peer-reviewed study?). Meeting abstracts may not be in the public domain and, thus, may not be available to other researchers, which is another reason to eschew their use. Certainly, posters are rarely in the public domain (a handout at the meeting notwithstanding) and should be avoided as references for the same reasons.

Sometimes, the author must cite articles that have been accepted for publication and are in press. In this situation, the reference citation must include the authors, title of paper, and journal. Although the journal CHEST does not allow the practice and most journals discourage it, some journals allow authors to cite a “paper in preparation” or “paper under sub-
mission.” CHEST and many other journals allow authors to cite “personal communications.” Such references require the written permission of the author to ensure the accuracy of the data and approval from the author. A caveat, however: the mention of data contained in a paper that is in preparation or data obtained from a discussion with others (or from an abstract or poster for that matter) may constitute publication of those data, albeit in minimal form, and may effectively preclude subsequent publication of the full data in a peer-reviewed journal. The best course may be to avoid the use of such data and references. If the personal communication, paper in preparation, or paper under submission format is used, these references are contained within the text and are not placed in the reference list. As discussed in the previous article in this series, keep references to a minimum, selecting only the most appropriate and elegant articles that you have read, preferably in their entirety, and fully understand.

**Placement**

The general rule is to place the reference immediately after the idea, which means that references may be embedded in the sentence and may not always appear at the end of a sentence. A fictitious example of such placement is as follows: “Occasionally, patients who receive combined modality treatment have increased serum potassium, phosphate, and creatinine, and decreased neutrophil and platelet counts that may be caused by an increased assault on the bone marrow.” Interestingly, omitting reference 9 would indicate that the conclusion was mine and not one reported by others.

It is important to decide whether you as the writer wish to emphasize science or the scientist. The fictitious reference in the paragraph above emphasizes the science. If I were to rewrite it as “Occasionally, patients who receive combined modality treatment have increased serum potassium, phosphate, and creatinine, and Smith et al have reported decreased neutrophil and platelet counts that Jones et al believe may be caused by an increased assault on the bone marrow.” I am emphasizing the groups that reported the science.

The journal CHEST requires references to be given as superscript numerals, numbered consecutively in the order in which they appear in text, tables, and figures, which means that a reference may be cited only within a table or figure and not within text, but it needs to be in sequential order of its appearance (ie, do not number all references in text and then number references in tables and figures). Some journals use a name and date style (eg, Jones, 1999; Jones and Smith, 2000; or Jones et al, 2003). If this reference style is used, it is important to remember to provide the citation correctly each time it is used (ie, do not omit “Smith” or “et al”). Several publications for the author or authors for each year must be identified with a letter appended to date (ie, Jones, 1999a; Jones, 1999b).

I have a personal distaste for automated reference programs that generate text reference citations because they often are cumbersome and lack the elegance that befits a scientific manuscript. Automated programs sometimes produce sentences such as (embellishing an example from the previous article): “Surgery alone is generally not beneficial for patients with advanced disease, but combined modality treatment (eg, chemotherapy plus radiotherapy) has improved survival compared with radiotherapy alone.” This sentence is best written as: “Surgery alone is generally not beneficial for patients with advanced disease, but combined modality treatment (eg, chemotherapy plus radiotherapy) has improved survival compared with radiotherapy alone,” which is a presentation that many automated reference programs cannot provide.

When several references are grouped together at first use, as in the illustrative sentence, they should be chronological (either newest to oldest or oldest to newest) and then alphabetical within each year; again, automated reference programs rarely work at this level of detail. The “Instructions to Authors” for the journal CHEST point out another problem with automated referencing programs: they are notorious for duplicating references.

The reference list of a revised manuscript should be checked for added or removed references. All references in the text must be in the reference list, and all reference citations in the reference list must be in the text, a table, or a figure.

**Accuracy**

It is incumbent on the author of an article to check all references for accuracy. Accuracy means not only that the names and order of authors, title of the article and the journal, year of publication, and volume and page numbers of the journal are correct but also that the citation actually supports the statement. Cite the reference exactly as given by the author, even if the title contains what you consider stylistic errors. Check references on PubMed (www.pubmed.gov) to ensure that a reference does not have a correction, which should be added to the reference in the reference list, or has not been redacted. Other authors may not carefully check their references, so do not depend on the accuracy of reference citations in other published articles.
Referencing Web-based materials has unique requirements. Because references on Web sites can change quickly, unlike printed material, it is necessary to include in the reference list the date the information was accessed: “National Comprehensive Cancer Network. Lung Cancer: Treatment Guidelines for Patients. Available at: http://www.cancer.org/docroot/CRI/content/CRI_2_4_7x_NCCN_Lung_Cancer_Treatment_Guidelines_for_Patients.asp. Accessed September 20, 2006.”

**Take-Home Lesson**

In a research article, references give credit to the work of other researchers and direct the reader to further information on the topic. To be useful, references must be valid, available, and accurate. Peer-reviewed journal articles that are published in a language that is easily read and understood by the author and that are widely available to the public may be considered to be the most valid references. Referenced articles should be accessible with only minor inconveniences for most researchers and interested readers. Ensuring the accuracy of references means checking the authors’ names, article title, journal, year, volume and, perhaps, issue numbers, and first and last page numbers. If the reference is Web-based, the link must be operative at the time the reference is submitted, the full link provided, and the date accessed given. References should be added at the appropriate point in the sentence (ie, after the first mention of the idea), and authors should remember that the use of names in a reference traditionally is used to focus attention on the scientists, rather than the science. Grouped references should be chronological and then alphabetical within years when first cited. It is inexcusable to fail to cite the work of other researchers or to attempt to pass off the ideas of others as one’s own.

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**REFERENCES**

1 Foote MA. How to make a good first impression: a proper introduction. Chest 2006; 130:1935–1937

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