

Non–Peer-reviewed Preprint Articles as References in Anesthesiology: Concerns

To the Editor:

The Instructions to Authors of ANESTHESIOLOGY clearly state that scientific articles without peer review are not to be included as references.¹ Despite this stipulation, we noticed there are three articles in ANESTHESIOLOGY^{2–4} citing articles from medRxiv. medRxiv is a preprint server for health sciences. The articles deposited in medRxiv have not undergone peer review.⁵ The medRxiv official website cautions readers that preprints are preliminary reports of work that have not been certified by peer review. They should not be relied on to guide clinical practice or health-related behavior and should not be reported in news media as established information.⁵

We found five articles in your journal^{4,6–9} with references from another preprint server, bioRxiv. The disadvantage of accepting non–peer-reviewed preprints from preprint servers as references might lead to:

1. References that are neither peer reviewed nor published in a scientific journal—questioning the reliability of the information.
2. Preprint servers allow authors to modify the deposited article and mention it with version number. The content cited by an article as a reference may be from one version of the preprint and the updated version(s) may not even have that particular content—questioning the authenticity of the information.
3. The content in the preprint might not be the same as the published version of the same article in a scientific journal, if indeed it is published.
4. The interpretation of the results, discussion, and conclusion of the preprint might change after peer review.

Whether ANESTHESIOLOGY allows citation of non–peer-reviewed preprints from preprint servers like medRxiv and bioRxiv, when the servers themselves decline any responsibility for those articles,⁵ needs discussion and clarification. If such preprints are allowed as references in future, it would be a good practice to require citation of the version posted.

Competing Interests

The authors declare no competing interests.

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Non–Peer-reviewed Preprint Articles as References in Anesthesiology: Reply

In Reply:

I thank Dr. Vijayakumar and coauthors for their letter, which correctly identifies that *ANESTHESIOLOGY* recently published several articles that contained citations from preprint servers, despite our clearly stated Instructions to Authors that scientific articles without peer review are not to be included as references.¹ Allowing non–peer-reviewed citations was an error on the part of the authors and *ANESTHESIOLOGY*.

Preprints are not peer reviewed. The journal perspective on preprints as trusted evidence, as stated traditionally in our Instructions to Authors and recently in an editorial,² is clear: they are not. Dr. Vijayakumar *et al.* further lucidly explicate the problems with non–peer-reviewed preprints as citations. The inappropriate inclusion of preprints in articles published in *ANESTHESIOLOGY* represented a shortcoming of the authors to read and abide the stated Instructions to Authors and a shortcoming of our editorial process.

As a result of the letter from Dr. Vijayakumar *et al.* we have, going forward, instituted an editorial check to ensure that published manuscripts do not contain non–peer-reviewed preprints, and we hope that authors will similarly not include them in their submitted manuscripts.

Competing Interests

The author declares no competing interests.

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