Library News
News and information from the Research Medical Library
THE UNIVERSITY OF TEXAS MD Anderson Cancer Center
Making Cancer History®

Journal Impact Factors Updated

Journal Citation Reports (JCR) 2023 update has been released. The new metric is based on 2022 data.

JCR is a database that calculates journal impact factors by using the last 3 years of data (2022 vs. 2021/2020) to calculate the average number of times selected articles have been cited within the last 2 years. A journal must have at least 3 years of published material to be eligible for an impact factor, meaning new journals may not have an impact factor. There are 2 main updates for this year's release:

1. Impact factors will display 1 decimal place instead of 3 decimal places.
2. 9000 new journals from the Arts & Humanities Citation Index and Emerging Sources Citation Index have been included.

The top 10 oncology journals listed for 2023:

1. CA-A Cancer Journal for Clinicians
2. Nature Reviews Clinical Oncology
3. Nature Reviews Cancer
4. Lancet Oncology
5. Annals of Oncology
6. Cancer Cell
7. Journal of Clinical Oncology
8. Molecular Cancer
9. Journal of Hematology & Oncology
10. JAMA Oncology

See the complete list for Oncology journals.

Read the Journal Citation Reports Reference Guide for more in-depth answers.

If you have questions about impact factors or other publication metrics, please reach out to the Research Medical Library, RML-Help@mdanderson.org.

Questioning the Credibility: ChatGPT's Limitations in Literature Reviews

Large Language Models like ChatGPT have the ability to analyze large amounts of data, generate human-like text, and assist users in various tasks. With abilities like this, you would think it would excel at helping researchers find articles for literature reviews. But does it? Although ChatGPT has proven to be a useful tool in some instances, it has many limitations when it comes to finding articles for literature reviews. We experimented with it in the Research Medical Library and the results were highly inaccurate. Here is what we found:

> **1. Different results for different people.** ChatGPT gives different answers to different people. Several of us asked ChatGPT exactly the same question at exactly the same time: "What are the most highly cited articles on autism?" ChatGPT gave each of us a different list of articles.
>
> **2. Fake information.** More than half of the articles ChatGPT gave us on autism were fake. They *sounded* credible but simply did not exist. It also failed to find the highest-cited articles even though it said it did. When we asked ChatGPT how it had selected the articles, it admitted that it could not actually provide a list of the highest-cited articles because it doesn't have access to citation databases. It doesn't have access to

literature databases or most journal articles because these require a subscription.

3. Outdated information. ChatGPT does not access the internet in real-time to generate its answers. It only knows the data it's been trained on, which ended in September 2021. If you use it to find articles, your literature review will be out of date.

4. Unknown sources of information. What data has ChatGPT been trained on anyway? How do we know the articles are from credible peer-reviewed journals? We don't. ChatGPT says it's trained on a "*mixture of licensed data, data created by human trainers, and publicly available data.*" When pressed to provide more information on its training resources, it would only vaguely say:

> "*I have been trained on a diverse range of data sources, including scientific literature, research papers, books, and articles, to develop a broad understanding of various topics. However, the specifics of which publishers' information or databases were included in my training data have not been publicly disclosed by OpenAI.*"

5. Incorrect search strings. Can ChatGPT generate search strings for you to plug into PubMed and other databases? We tested it and found that ChatGPT generates incredibly simplistic search strings that retrieve thousands of irrelevant results while missing the relevant ones. It makes up subject headings, searches the wrong fields, and ignores parts of the requested topics. It doesn't search for plurals or synonyms, and it creates inaccurate ways to limit your results by year, age, human, and peer-reviewed journals. Many of the search strings it gave us wouldn't even run.

ChatGPT is fast, easy, fun, and new, but it can't be relied on for finding articles for a literature review. Even ChatGPT itself recommends you search library resources: "*To access the most up-to-date information on articles, I recommend searching academic databases like PubMed, Scopus, or Web of Science.*"

The Research Medical Library provides access to the journal indexes above. Databases like *PubMed* index real articles from real journals and include articles that are up to date. Databases like *Scopus* and *Web of Science* provide accurate article citation counts. *Journal Citation Reports* provides trustworthy metrics like journal impact factors and article influence scores. The Research Medical Library also provides a literature search service. Librarians can give you a list of articles on your topic narrowed down to exactly the types of studies you want, with the type of patients you want from the types of journals you want. For reliable sources for your literature review, contact us at RML-Help@mdanderson.org.

Unusual Terms Used in Scientific Writing and Publishing: Persistent Identifiers

You may not be familiar with the term "persistent identifiers" (also called persistent unique identifiers), but you've probably used such identifiers in your work. The National Library of Medicine Data Glossary defines a persistent identifier as "a string of letters and numbers used to distinguish between and locate different objects, people, or concepts."[1] Simply put, persistent identifiers help people find stuff online. A key feature of persistent identifiers is that these alphanumeric strings do not change, unlike web addresses (i.e., uniform resource locators or URLs). Below are some commonly used persistent identifiers.

Digital Object Identifier (DOI)
DOIs have been around since the late 1990s and are most often used to identify articles in scientific journals.[2] Over the years, the use of DOIs has expanded, and they are now being assigned to data sets, protocols, and preprints.[3] Of note, an article posted as a preprint (i.e., shared on a preprint server before peer review) will have a different DOI than the peer-reviewed version published in a journal. However, many preprint servers add links to the final published article.[4]

PMID and PMCID

PMIDs and PMCIDs, also called PubMed identifiers and PubMed Central identifiers, respectively, are used to identify articles published in medical and scientific journals that are indexed on those platforms.[5] An article published on both PubMed and PubMed Central will have both a PMID and a PMCID and most likely a DOI as well.

ORCID identifier

An ORCID (Open Researcher and Contributor ID) identifier is a 16-digit number assigned to an individual researcher.[6] An ORCID identifier is available at no cost and can help distinguish between researchers with similar names. A useful feature of ORCID is that a researcher's identifier remains the same if they change their name because of marriage, divorce, or other reasons.

RRID

RRIDs (Research Resource Identifiers) are used to distinguish resources used in scientific research. Such materials include cell lines, plasmids, antibodies, model organisms, and tools such as laboratory equipment, software, and databases.[7] The purpose of RRIDs is to improve the transparency and reproducibility of research by offering a more specific identification system than a supplier's name or catalog number, and many journals now encourage the use of RRIDs.

Other persistent identifiers

In addition to DOI, PMID, and PMCID, commonly used persistent identifiers for publications include ISBN (International Standard Book Number) for books and ISSN (International Standard Serial Number) for serial publications (e.g., journals, magazines, newspapers). Site- or organization-specific identifiers are also common. For example, the preprint server arXiv assigns documents an arXiv identifier in addition to a DOI.

Similar to an ORCID identifier, an ISNI (International Standard Name Identifier) is used to identify people. But whereas an ORCID identifier is focused on researchers, an ISNI assigns unique identifiers to musicians, novelists, artists, or anyone who produces creative work—including researchers.[8]

Also similar to an ORCID identifier is the ROR (Research Organization Registry) identifier, but an ROR identifier is a persistent identifier for an organization rather than an individual. This can be useful for authors whose organization changes its name, as was the case when Southwest Texas State University became Texas State University–San Marcos in 2003 and then Texas State University in 2013.[9]

Numerous other persistent identifiers exist for various purposes, and comprehensive lists are available elsewhere.[10,11]

References

1. Data glossary: Persistent unique identifier. The National Library of Medicine. Accessed May 9, 2023. https://www.nnlm.gov/guides/data-glossary/persistent-unique-identifier#:~:text=A%20Persistent%20Unique%20Identifier%20(PID,objects%2C%20frequently%20a%20journal%20article
2. Introduction. In: *DOI Handbook*. International DOI Foundation. Updated October 17, 2015. Accessed May 9, 2023. https://www.doi.org/doi_handbook/1_Introduction.html
3. Deming S. Expanding use of digital object identifiers in scientific publishing. *The Write Stuff*, Summer 2020. Accessed May 9, 2023. https://openworks.mdanderson.org/cgi/viewcontent.cgi?article=1003&context=writestuff_2020
4. Tutt B. Unusual terms used in scientific writing and publishing: Preprints and preprint servers. *The Write Stuff*, Autumn 2018. Accessed May 9, 2023. https://openworks.mdanderson.org/cgi/viewcontent.cgi?article=1000&context=writestuff_2018
5. Tutt B. Unusual terms used in scientific writing and publishing: PMID and PMCID. *The Write Stuff*, Spring 2017. Accessed May 9, 2023. https://openworks.mdanderson.org/cgi/viewcontent.cgi?article=1002&context=writestuff_2017
6. ORCID + researchers. ORCID. Accessed May 9, 2023. https://info.orcid.org/researchers
7. Ninetto A. Using Research Resource Identifiers (RRIDs) to enhance rigor and reproducibility. *The Write Stuff*, Summer 2019. Accessed May 9, 2023. https://openworks.mdanderson.org/cgi/viewcontent.cgi?article=1003&context=writestuff_2019
8. ISNI aims & objectives. ISNI International Agency. Updated March 22, 2020. Accessed May 9, 2023. https://isni.org/resources/pdfs/isni-aims-and-objectives.pdf
9. Name history. Texas State University. Accessed May 9, 2023. https://www.txst.edu/about/history-traditions/names.html
10. Persistent identifiers. CERN Scientific Information Service. Accessed May 9, 2023. https://sis.web.cern.ch/submit-and-publish/persistent-identifiers
11. Persistent identifiers. National Transportation Library, US Department of Transportation. Accessed May 9, 2023. https://transportation.libguides.com/persistent_identifiers

Two Rules About Generative AI That Scientific Publishers Agree On

Scientific publishing experts and an increasing number of scientific publishers concur on two basic guidelines regarding the role of generative artificial intelligence (AI), such as ChatGPT, in the creation of scientific manuscripts.

Generative AI use must be acknowledged. Authors should disclose the use of generative AI to help produce manuscript text or as part of a study design. An update to the American Medical Association (AMA) Manual of Style (11th edition) reads:

> Authors should report the use of artificial intelligence, language models, machine learning, or similar technologies to create content or assist with writing or editing of manuscripts in the Acknowledgment section or Methods section if this is part of formal research design or methods.

Likewise, the International Committee of Medical Journal Editors (ICMJE) stated that journals should require authors to disclose their use of such technologies to produce a manuscript.

MD Anderson's chief technology and digital officer, David Jaffray, Ph.D., issued a similar statement regarding large language models, writing, "Use of this technology to generate any final product should be disclosed, and, in doing so, the individual is responsible and accountable for the information shared being accurate."

AI cannot be an author. The AMA style manual prohibits listing generative AI tools as authors. The ICMJE guidelines also say that chatbots "should not be listed as authors because they cannot be responsible for the accuracy, integrity, and originality of the work." This statement aligns with the ICMJE's longstanding recommendations on authorship criteria.

These two recommendations have been endorsed by the JAMA Network journals, Springer Nature journals, and others.

Bibliography

Flanagin A. Ethical and Legal Considerations. In: Christiansen S, Iverson C, Flanagin A, et al. *AMA Manual of Style: A Guide for Authors and Editors*. 11th ed. Oxford University Press; 2020. Accessed July 17, 2023. https://academic.oup.com/amamanualofstyle/book/27941/chapter/207564250#med-9780190246556-chapter-5-div2-30011

Flanagin A, Bibbins-Domingo K, Berkwits M, Christiansen SL. Nonhuman "Authors" and Implications for the Integrity of Scientific Publication and Medical Knowledge. *JAMA*. 2023; 329(8): 637-639. doi:10.1001/jama.2023.1344

International Committee of Medical Journal Editors. Defining the Role of Authors and Contributors. Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals. Updated May 2023. Accessed July 17, 2023.

Should "Predominate" or "Predominant" Predominate in Scientific Writing?

Many writing experts hold that *predominate* is a verb, *predominant* is an adjective, and the use of *predominate* as an adjective is incorrect.[1] However, the acceptable usage of these words is changing. Nowadays, *predominate* is often used as an adjective,[2] although *predominant* is the more established and common adjectival form.

Acceptable:

Gastropods are the predominate Cretaceous-period fossils found in Texas.

Preferred:

Gastropods are the predominant Cretaceous-period fossils found in Texas.

Especially in formal and technical writing, the use of *predominant* as an adjective is preferred over that of *predominate*.

> *EGFR*^{T790M} is the predominant mutation driving acquired resistance to EGFR-targeted tyrosine kinase inhibitors in non-small cell lung cancer.

Although *predominate* can be used as either an adjective or a verb, *predominant* cannot be used as a verb; it's only an adjective.

> Smokers predominate among patients with lung cancer.

Interestingly, the related words *dominate* and *dominant* don't exhibit the flexibility of *predominate* and *predominant*. *Dominate* is strictly a verb, and *dominant* is only an adjective.

Like the adjectival forms, the adverbs *predominantly* and *predominately* are both used, though *predominantly* is by far the predominant word choice.

References:

1. Garner BA. *Garner's Modern American Usage*, 3rd ed. Oxford University Press; 2009:650-651.

2. Merriam-Webster.com. Predominate. Accessed June 26, 2023. https://www.merriam-webster.com/dictionary/predominate

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Association for the Advancement of Medical Instrumentation (AAMI) titles

The Association for the Advancement of Medical Instrumentation (AAMI) offers standards and technical reports that inform safe hospital sterilization practices.

AAMI Sterilization Standards has moved to a new website. This new platform allows MD Anderson users to access this material while connected to our network* without having to create an account or login.

The Research Medical Library has access to these titles:

1. AAMI TIR11:2005(R2021) Selection and use of protective apparel and surgical drapes in health care facilities
2. AAMI TIR12:2020 Designing, testing, and labeling medical devices intended for processing by health care facilities: A guide for device manufacturers
3. AAMI TIR30:2011(R2016) A compendium of processes, materials, test methods, and acceptance criteria for cleaning reusable medical devices
4. AAMI TIR34:2014/(R2021) Water for the reprocessing of medical devices
5. AAMI TIR63:2014(R2023) Management of loaned critical and semi-critical medical devices that require sterilization or high-level disinfection
6. AAMI TIR67: 2018(2022) Promoting safe practices pertaining to the use of sterilant and disinfectant chemicals in health care facilities
7. AAMI TIR68:2018(R2022) Low and intermediate-level disinfection in healthcare settings for medical devices and patient care equipment and sterile processing environmental surfaces
8. AAMI TIR79:2018 ST79 Self-assessment for health care facilities
9. ANSI/AAMI/ISO 18472:2022 Sterilization of health care products—Biological and chemical indicators—Test equipment
10. ANSI/AAMI PB70:2022 Liquid barrier performance and classification of protective apparel and drapes intended for use in health care facilities
11. ANSI/AAMI ST40:2004(R2018) Table-top dry heat (heated air) sterilization and sterility assurance in health care facilities
12. ANSI/AAMI ST41:2008(R2018) Ethylene oxide sterilization in health care facilities: Safety and effectiveness

13. ANSI/AAMI ST58:2013(R2018) Chemical sterilization and high-level disinfection in health care facilities
14. ANSI/AAMI ST65:2008(R2018) Processing of reusable Surgical textiles for use in health care facilities
15. ANSI/AAMI ST79:2017 Comprehensive guide to steam sterilization and sterility assurance in health care facilities
16. ANSI/AAMI ST79:2017 Amendments A1:2020 and A2:2020 and A3:2020 and A4:2020 Comprehensive guide to steam sterilization and sterility assurance in health care facilities
17. ANSI/AAMI ST90:2017 Processing of health care products –Quality management systems for processing in health care facilities
18. ANSI/AAMI ST91:2021 Flexible and semi-rigid endoscope processing in health care facilities
19. ANSI/AAMI ST98:2022 Cleaning validation of health care products – Requirements for development and validation of a cleaning process for medical devices

* connected to the network via VPN, VXRemote, Velocloud, or on campus

If you have questions about AAMI or other resources, please email the Research Medical Library at RML-Help@mdanderson.org

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