

The Journal Impact Factor 2021

On June 30, 2022, the Clarivate™ media group published the new rankings of scientific journals with impact factor in its *Journal Citation Reports*. For the 2021 reporting year,

9,588 of the 9,626 journals included have a journal impact factor (JIF).

The dental journals that had a JIF in 2021 are listed below. For

comparison, the 20 scientific journals with the highest JIF are contrasted. The overview is concluded with current critical comments on the JIF.

| JIF rank 2021 | Journal | JIF 2021 | JIF 2020 | JIF rank 2020 |
|---------------|---|----------|----------|---------------|
| 1 | International Journal of Oral Science | 24.897 | 6.344 | 4 |
| 2 | Periodontology 2000 | 12.239 | 7.589 | 2 |
| 3 | Journal of Dental Research | 8.924 | 6.116 | 5 |
| 4 | Journal of Clinical Periodontology | 7.478 | 8.728 | 1 |
| 5 | Japanese Dental Science Review | 6.468 | 5.093 | 11 |
| 6 | Oral Oncology | 5.972 | 5.337 | 7 |
| 7 | Dental Materials | 5.687 | 5.304 | 8 |
| 8 | International Endodontic Journal | 5.165 | 5.264 | 10 |
| 9 | Journal of Evidence-Based Dental Practice | 5.100 | 5.267 | 9 |
| 10 | Clinical Oral Implants Research | 5.021 | 5.977 | 6 |
| 11 | Journal of Dentistry | 4.991 | 4.379 | 14 |
| 12 | Journal of Periodontology | 4.494 | 6.993 | 3 |
| 13 | Journal of Endodontics | 4.422 | 4.171 | 16 |
| 14 | Journal of Prosthodontic Research | 4.338 | 4.642 | 12 |
| 15 | Journal of Adhesive Dentistry | 4.309 | 2.359 | 51 |
| 16 | Clinical Implant Dentistry and Related Research | 4.259 | 3.932 | 18 |
| 17 | Journal of Prosthetic Dentistry | 4.148 | 3.426 | 25 |
| 18 | Molecular Oral Microbiology | 4.107 | 3.563 | 22 |
| 19 | Oral Diseases | 4.068 | 3.511 | 23 |
| 20 | Journal of Periodontal Research | 3.946 | 4.419 | 13 |
| 21 | Caries Research | 3.918 | 4.056 | 17 |
| 22 | BMC Oral Health | 3.747 | 2.757 | 35 |
| 23 | Journal of Dental Sciences | 3.719 | 2.080 | 59 |

| JIF rank 2021 | Journal | JIF 2021 | JIF 2020 | JIF rank 2020 |
|---------------|---|----------|----------|---------------|
| 24 | International Journal of Oral Implantology | 3.654 | --- | --- |
| 25 | Clinical Oral Investigations | 3.606 | 3.573 | 21 |
| 26 | Journal of Oral Rehabilitation | 3.558 | 3.837 | 19 |
| 27 | Journal of Oral Pathology & Medicine | 3.539 | 4.253 | 15 |
| 28 | Dentomaxillofacial Radiology | 3.525 | 2.419 | 49 |
| 29 | Journal of Prosthodontics – Implant, Esthetic, and Reconstructive Dentistry | 3.485 | 2.757 | 36 |
| 30 | Journal of the American Dental Association | 3.454 | 3.634 | 20 |
| 31 | Dental Traumatology | 3.328 | 3.333 | 27 |
| 32 | International Journal of Paediatric Dentistry | 3.264 | 3.455 | 24 |
| 33 | Progress in Orthodontics | 3.247 | 2.750 | 37 |
| 34 | Journal of Cranio-Maxillofacial Surgery | 3.192 | 2.078 | 61 |
| 35 | Journal of Applied Oral Science | 3.144 | 2.698 | 38 |
| 36 | European Journal of Orthodontics | 3.131 | 3.075 | 29 |
| 37 | Oral and Maxillofacial Surgery Clinics of North America | 3.130 | 2.802 | 33 |
| 38 | Journal of Esthetic and Restorative Dentistry | 3.040 | 2.843 | 31 |
| 39 | Implant Dentistry | 3.000 | 2.454 | 47 |
| 40 | International Journal of Oral and Maxillofacial Surgery | 2.986 | 2.789 | 34 |
| 41 | International Journal of Implant Dentistry | 2.984 | 2.384 | 50 |
| 42 | Operative Dentistry | 2.937 | 2.440 | 48 |

Table 1 Journal impact factor (JIF) for 2021 for the 92 journals listed in the category *Dentistry, Oral Surgery & Medicine* with comparison of the previous year's JIF.

| JIF rank 2021 | Journal | JIF 2021 | JIF 2020 | JIF rank 2020 | JIF rank 2021 | Journal | JIF 2021 | JIF 2020 | JIF rank 2020 |
|---------------|--|----------|----------|---------------|---------------|---|----------|----------|---------------|
| 43 | International Journal of Computerized Dentistry | 2.923 | 1.883 | 67 | 69 | Acta Odontologica Scandinavica | 2.232 | 2.331 | 53 |
| 44 | International Journal of Oral and Maxillofacial Implants | 2.912 | 2.804 | 32 | 70 | International Journal of Periodontics & Restorative Dentistry | 2.227 | 1.840 | 71 |
| 45 | Odontology | 2.885 | 2.634 | 40 | 71 | Quintessence International | 2.175 | 1.677 | 76 |
| 46 | Medicina Oral, Patología Oral y Cirugía Bucal | 2.883 | 2.047 | 62 | 72 | European Journal of Oral Sciences | 2.160 | 2.612 | 43 |
| 47 | Gerodontology | 2.750 | 2.980 | 30 | 73 | Journal of Oral and Maxillofacial Surgery | 2.136 | 1.895 | 66 |
| 48 | British Dental Journal | 2.727 | 1.626 | 79 | 74 | Journal of Periodontal and Implant Science | 2.086 | 2.614 | 42 |
| 49 | International Journal of Dental Hygiene | 2.725 | 2.477 | 46 | 75 | British Journal of Oral & Maxillofacial Surgery | 2.018 | 1.651 | 78 |
| 50 | American Journal of Orthodontics and Dentofacial Orthopedics | 2.711 | 2.650 | 39 | 76 | Journal of Advanced Prosthodontics | 1.989 | 1.904 | 65 |
| 51 | Angle Orthodontist | 2.684 | 2.079 | 60 | 77 | Cleft Palate-Craniofacial Journal | 1.915 | 1.433 | 83 |
| 52 | Brazilian Oral Research | 2.674 | 2.203 | --- | 78 | Oral Radiology | 1.882 | 1.852 | 70 |
| 53 | Archives of Oral Biology | 2.640 | 2.633 | 41 | 79 | International Journal of Prosthodontics | 1.785 | 1.681 | 75 |
| 54 | International Dental Journal | 2.607 | 2.512 | 45 | 80 | American Journal of Dentistry | 1.748 | 1.522 | 82 |
| 55 | Orthodontics & Craniofacial Research | 2.563 | 1.826 | 72 | 81 | Australian Endodontic Journal | 1.719 | 1.659 | 77 |
| 56 | Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology | 2.538 | 2.589 | 44 | 82 | Cranio – The Journal of Craniomandibular Practice | 1.670 | 2.020 | 63 |
| 57 | European Journal of Dental Education | 2.528 | 2.355 | 52 | 83 | Journal of Oral Science | 1.630 | 1.556 | 81 |
| 58 | Community Dentistry and Oral Epidemiology | 2.489 | 3.383 | 26 | 84 | Oral Health & Preventive Dentistry | 1.595 | 1.256 | 87 |
| 59 | Journal of Stomatology, Oral and Maxillofacial Surgery | 2.480 | 1.569 | 80 | 85 | Journal of Oral Implantology | 1.546 | 1.779 | 74 |
| 60 | Journal of Oral Facial Pain & Headache | 2.457 | 1.871 | 69 | 86 | Korean Journal of Orthodontics | 1.361 | 1.372 | 84 |
| 61 | Dental Materials Journal | 2.418 | 2.102 | 58 | 87 | Journal of the Canadian Dental Association | 1.348 | 1.316 | 86 |
| 62 | Pediatric Dentistry | 2.378 | 1.874 | 68 | 88 | Seminars in Orthodontics | 1.340 | 0.970 | 89 |
| 63 | Journal of Orofacial Orthopedics – Fortschritte der Kieferorthopädie | 2.341 | 1.938 | 64 | 89 | Journal of Clinical Pediatric Dentistry | 1.338 | 1.065 | 88 |
| 64 | European Journal of Paediatric Dentistry | 2.327 | 2.231 | 56 | 90 | Community Dental Health | 1.330 | 1.349 | 85 |
| 65 | Journal of Dental Education | 2.313 | 2.264 | 55 | 91 | Australasian Orthodontic Journal | 0.269 | 0.226 | 90 |
| 66 | Australian Dental Journal | 2.259 | 2.291 | 54 | 92 | Implantologie | 0.127 | 0.125 | 91 |
| 67 | Journal of Public Health Dentistry | 2.258 | 1.821 | 73 | | | | | |
| 68 | Head & Face Medicine | 2.246 | 2.151 | 57 | | | | | |

Table 1 Journal impact factor (JIF) for 2021 for the 92 journals listed in the category *Dentistry, Oral Surgery & Medicine* with comparison of the previous year's JIF (continuation).

| Year | JIF |
|------|--------|
| 2021 | 24.897 |
| 2020 | 6.344 |
| 2019 | 3.047 |
| 2018 | 2.750 |
| 2017 | 4.138 |
| 2016 | 3.930 |
| 2015 | 2.595 |
| 2014 | 2.531 |
| 2013 | 2.029 |
| 2012 | 2.719 |
| 2011 | 1.411 |
| 2010 | 0.815 |

Table 2 Development of the JIF of the *International Journal of Oral Science* between 2010 and 2020.

Included journals and general development

The *Dentistry, Oral Surgery & Medicine* category includes 92 journals with a JIF, one more than in previous years due to

- the new inclusion of the *International Journal of Oral Implantology* and
- the journal *Brazilian Oral Research*, which was included too late in the previous year,
- while eliminating the title *European Journal of Oral Implantology* (renamed *International Journal of Oral Implantology* as of January 2019) (Table 1).

The 2021 JIF values range from 0.127 (the German-language journal *Implantologie*) to – almost incredibly for dental journals – 24.897 (*International Journal of Oral Science*), tripling the peak value of the previous year (8.728, *Journal of Clinical Periodontology*; see Table 2 for the evolution of this journal). Although the JIF-related arithmetic mean of all dental journals increased from just under 2.9 in 2020 to just almost 3.4 in 2021, 24 of the 91 journals have a lower JIF than in the previous year.

| JIF rank2021 | Journal | JIF2021 |
|--------------|---|---------|
| 1 | CA-A Cancer Journal for Clinicians | 286.130 |
| 2 | Lancet | 202.731 |
| 3 | New England Journal of Medicine | 176.079 |
| 4 | Journal of the American Medical Association | 157.335 |
| 5 | Nature Reviews Molecular Cell Biology | 113.915 |
| 6 | Nature Reviews Drug Discovery | 112.288 |
| 7 | Nature Reviews Immunology | 108.555 |
| 8 | Lancet Respiratory Medicine | 102.642 |
| 9 | British Medical Journal | 93.333 |
| 10 | Nature Medicine | 87.241 |
| 11 | Lancet Microbe | 86.208 |
| 12 | World Psychiatry | 79.683 |
| 13 | Nature Reviews Microbiology | 78.297 |
| 14 | Lancet Psychiatry | 77.056 |
| 15 | Nature Reviews Materials | 76.679 |
| 16 | Nature Reviews Gastroenterology & Hepatology | 73.082 |
| 17 | Lancet Public Health | 72.427 |
| 18 | Chemical Reviews | 72.087 |
| 19 | Lancet Infectious Diseases | 71.421 |
| 20 | Nature Reviews Cancer | 69.800 |
| ... | ... | |
| 9,588 | Sen-I Gakkaishi (Journal of the Society of Fiber Science and Technology, Japan) | 0.016 |

Table 3 The 20 scientific journals with the highest journal impact factor (JIF) and the bottom of the ranking of 2021. Note: Nineteen of the top 20 journals are from the biomedical field.

To “rank” the JIF of dental journals in the overall picture of all scientific journals, Table 3 shows the 20 journals with the highest JIF values.

“The citation frequency is often equated with the quality of a journal. However, this is incorrect. The citation frequency can only be used for statements about the impact of a scientific article, less for the content-related quality of the results.”

Dr. Jasmin Schmitz, head of publication consulting, Publisso, ZB MED – Information Centre for Life Sciences, Cologne, Germany [6]

Criticism of the JIF

The numerous weaknesses and shortcomings of the JIF have been extensively documented in the literature (e.g., [3, 8]) and in the JIF-specific analyses published annually in this journal and the *Deutsche Zahnärztliche Zeitschrift* since 2015. In the past 12 months, criticisms have included (Table 4):

- The calculation of the JIF as an arithmetic mean,
- the lack of differentiation between the various publication types (research articles, reviews, clinical recommendations, etc.),
- the manipulative-distorting influence of self-citations and citation cartels,
- the misconception that contributions published in JIF journals are

| Citation | Source |
|--|--------------------------|
| “One of the most commonly noted constraints of the JIF is its calculation as a mean. This mode of data representation has the potential limitation of a small number of highly cited manuscripts disproportionately influencing the JIF. Therefore, if the number of citations per article is a skewed distribution, a metric based on a calculation of a mean could render an evaluation that is not representative of the majority of the articles included in the calculation.” | Daugherty et al. [1] |
| “The other most commonly described constraint of the JIF is an aggregate index encompassing many different types of publications that include not only original research articles but also reviews, guidelines, and statements, which have higher citation metrics.” | Daugherty et al. [1] |
| “For example, a journal (A) scored almost a double increase in its IF during just 4 years. It turned out that in a review published in another journal (B), out of 490 references 445 were citations of articles published by journal A and all of them during 2 years from which the journal's IF was calculated. Incidentally, three of the four authors of that review were on the editorial board of journal A. While self-citations are very easy to identify, citation cartels are difficult to track and can do the most harm to scientometrics based on manipulated data.” | Górski et al. [2] |
| “In view of the above, we can conclude that the evaluation of the quality of publications based exclusively on the impact of the journal in which the article was published is, in addition to being imprecise, unfair in the case of the nursing discipline, given the limited possibility of publishing in this type of journal for our group.” | Salamanca Castro [5] |
| “Although the JIF refers to a journal as a whole and says nothing about the influence or even the scientific quality of individual articles, it is often used to assess the research performance of scientists. This is not the only reason why the JIF is often criticized. It is also highly dependent on the subject area and thus not comparable across disciplines; in addition, it only takes into account the past two years in each case. The calculation is not very transparent and often not independently reproducible.” | Open Access Network [4] |
| “To be able to cite journals by rank, JIFs are given to three decimal places and without confidence intervals or error bars. However, this data accuracy is an illusion. Measuring citation counts is not an exact science, as has been shown in several examples in bibliometrics, e.g., Vanclay, 2012.” | University of Zurich [7] |

Table 4 Critical statements on the JIF

Tab. 1–4: J. C. Türp

automatically of high quality or that only articles published in JIF journals are of high quality,

- the lack of comparability among different disciplines,
- the misconception that the JIF is a precise value.

Conflict of interest

The author declares that there is no conflict of interest as defined by the guidelines of the International Committee of Medical Journal Editors.

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