

On the relevance of the Impact Factor and other factors

Murali Sundaram • Juerg Hodler • Daniel I. Rosenthal

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This editorial and the “Perspective” on scientific journals and impact factors by W. Hendee, Bernstein, and Levine are the outcome of the Annual Editors’ Forum, which was hosted by the Imaging Institute of the Cleveland Clinic on August 20, 2011. In attendance at the forum were editors from Europe, Canada, and the United States representing 13 scientific journals concerned with medical imaging.

One of the items on the agenda was the influence of the Impact Factor (IF) on the make-up of the journal. In our view, as lucidly outlined by Hendee et al., the IF has been brandished out of proportion as a signal of a journal’s worthiness. The IF is a metric that measures the citations of a journal’s articles over a 2-year period. The ranking of a journal is based on the 2-year IF.

One of us (J.H.) gave a presentation on the influence of the IF on European radiology departments. Based on responses to a questionnaire survey, Hodler reported that promotions committees placed more emphasis on work published in journals with higher IFs and that a rise in a

journal’s IF could influence the probability that a work would be submitted to *Skeletal Radiology*.

To evaluate this position, we would like to share with you some metrics as they pertain to *Skeletal Radiology* with regard to citations, impact factor rank, and time. Based upon the 2-year IF, *Skeletal Radiology* is ranked 70 of 111 imaging journals. However, it ranks 38th based on the number of citations and 10th based on the cited half-life of articles, which is 8.8 years. These facts require interpretation. In a fast moving scientific field, it is probable that citations within 2 years capture the importance of an article. However, in our field, because of the relative rarity of the conditions, knowledge grows by the gradual accretion of information over a much longer time. In recognition of this, the journal has had a dedicated case report section since its inception. Case reports can be a sacrificial lamb on the altar of the IF because by their nature, they represent rarities, unlikely to be cited promptly after publication.

It is often assumed that the higher the IF, the better the science. This is certainly an oversimplification. In their “Perspective” article, Hendee et al. have shown how the IF can be manipulated. To this we would add that the number of citations is merely an indicator of the degree to which a topic is “au courant”, not the accuracy or value of a paper. Completely false papers may receive a large number of citations as others debunk them. Scientific validity is a test of time and not a 2-year citation count.

For these reasons and because of the narrowness of what it measures, we believe that the IF is of limited value for a journal such as *Skeletal Radiology*. The quality of a publication can not be evaluated based upon the IF of the journal in which it is published.

M. Sundaram (✉)
The Cleveland Clinic Foundation,
Cleveland, OH, USA
e-mail: sundarm@ccf.org

J. Hodler
Institut für Diagnostische und Interventionelle Radiologie,
UniversitätsSpital Zürich,
Zürich, Switzerland

D. I. Rosenthal
Massachusetts General Hospital,
Boston, MA, USA

We agree with the Science and Technology Committee of the United Kingdom parliament, which wrote in its report on peer review in scientific publications: “We have concerns about the use of journal Impact Factor as a proxy measure for the quality of an individual article.” (<http://www.publications.parliament.uk/pa/cm201012/cmselect/cmsctech/856/85602.htm>) The

time-honored process of blinded peer review (authors and reviewers) is the best assurance of good science, either basic or applied. *Skeletal Radiology* urges promotions committees to take into account the aspects of a subspecialty that may devalue the 2-year impact factor and to recognize the honorary and selfless contributions of reviewers to the advancement of science.