

Editorial

Impact factor of *Cardiovascular Research* in 2000: all time high!

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Impact factor in 2000

Fig. 1 shows that Cardiovascular Research will score an all time high impact factor of 3.59 in the year 2000. This impact factor reflects the citations during the year 2000 to the contents of our journal in the years 1998 and 1999. Although the official impact factor of the Institute for Scientific Information will only be communicated at the end of 2001, the accuracy of our previous estimates may be appreciated from a comparison of the solid and dotted lines in Fig. 1.

In Fig. 2 we show the impact of the contents of *Cardiovascular Research* of the years 1995 till 1999 during the years since publication. This graph differs from

the usual way of expressing citation frequency, but has the advantage that it permits easier comparison of the impact of consecutive year volumes of the journal. Fig. 2 shows an optimum for the citation frequency of the 1995 contents in year 5 since publication (i.e. during 1999) and in year 4 for the 1996 contents (i.e. also during 1999) [1]. The impact factor is a mixture of citation during year 3 of what was published two years before and of citation during year 2 of what was published one year before with year one as the year of publication. Thus, the optimal citation frequency is obtained during years that no longer have significance for the calculation of the official impact factor. For the contents of the more recent years (1997 till 1999) the optimal citation frequency cannot yet be determined.

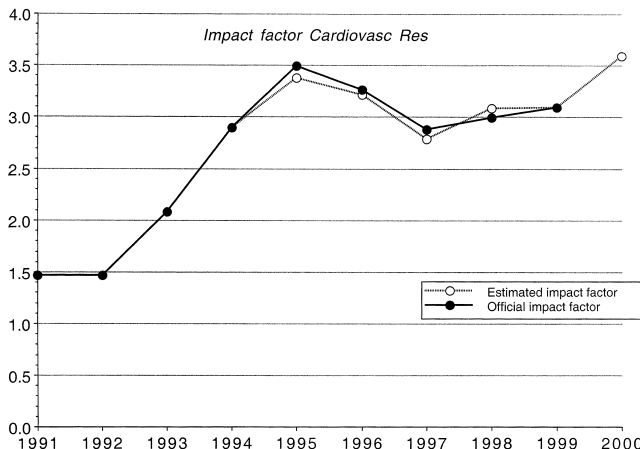


Fig. 1. Impact factor of *Cardiovascular Research* from 1991 till 2000. Solid lines: official impact factors from the Institute for Scientific Information (ISI). Dotted lines: estimates of editorial team prior to the publication of the official values.

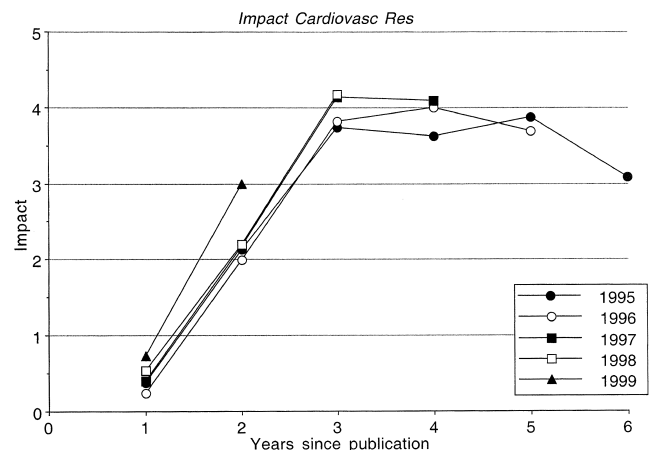


Fig. 2. Impact of the contents of *Cardiovascular Research* of the years 1995–1999 during the years since publication. Abscissa: year 1 depicts the year of publication. Thus, year 1 is 1995 for the 1995 contents and 1999 for the 1999 contents. Ordinate: citations during a year indicated at the abscissa divided by the number of papers published in a given year. The impact factor of the year 2000 can be deduced by taking the weighed average of the impact of the 1998 contents during year 3 and of the impact of the 1999 contents during year 2.

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Fig. 2 shows also that the contents of 1999 were more frequently cited during year 1 (1999) and year 2 since publication (2000) than the contents of any of the preceding years. Since citation of the contents of the year 1999 during the year 2001 will be the more important parameter for the impact factor of 2001, the editors, authors and reviewers can be confident that a new all time high will be scored in 2001 !

Potency for the future

Last year we acknowledged the help of many thousands of our reviewers who helped us with the editorial decision process over the last years [2]. Reviewers play an important role in assisting editors to make priority decisions [3]. We showed previously that an artificial procedure by which the contents of the journal in 1997 and 1998 were reduced by excluding papers on the basis of reviewer's priorities assigned to the individual papers, would have led to an increase of the impact factor in 1999 by 40% (from 3.09 to 4.33) with an (unacceptable) reduction of the contents of the journal from 100% to 24% [4].

Fig. 3 shows the result of the same procedure applied to the 1998 and 1999 contents for the impact factor in 2000 (see legend for further details). Obviously, the impact factor would have increased from 3.59 (Fig. 3, right ordinate, but see also Fig. 1) to 5.10. At the same time the contents would have been reduced from 100% to 28%. Fig.

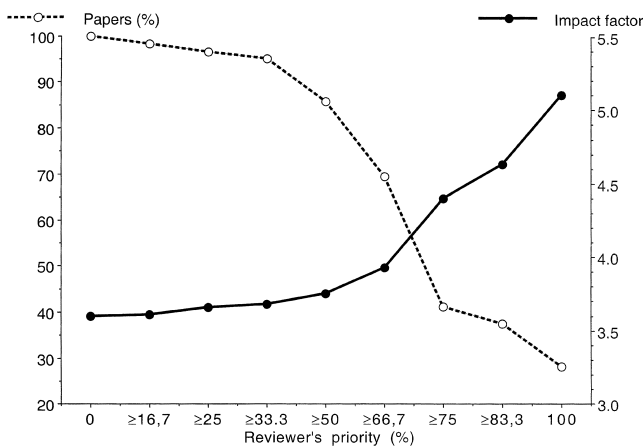


Fig. 3. The effect of an artificial reduction of the contents of *Cardiovascular Research* in 1998 and 1999 on the impact factor in 2000. A reviewer's priority of 100% indicates that all two or three reviewers assigned a high priority to a manuscript. A priority of 0% indicates that all two or three reviewers assigned a low priority. If only manuscripts with 100% priority score would have been published the contents would have been reduced to 28% with a concomitant increase of the impact factor from 3.59 to 5.10.

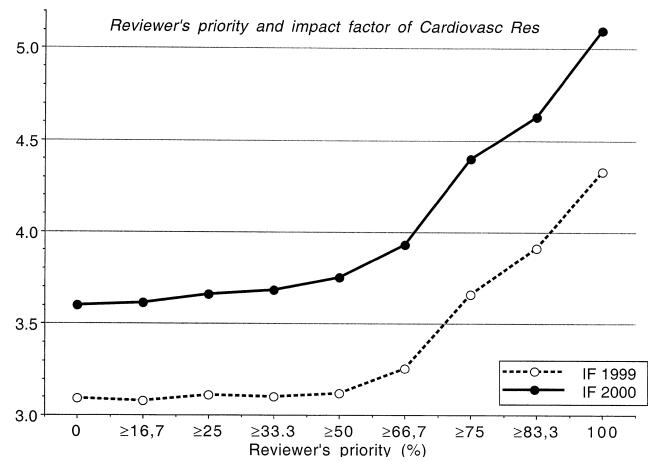


Fig. 4. The effect of an artificial reduction of the contents of *Cardiovascular Research* in 1998 and 1999 on the impact factor in 2000 (solid line) and of the contents of *Cardiovascular Research* in 1997 and 1998 on the impact factor in 1999 (dashed line). See the legend of Fig. 3 for further details. If only manuscripts with 100% priority score would have been published the theoretical top impact factor would have been 4.33 in 1999 and 5.10 in 2000.

3 shows that an impact factor of 5.10 indicates some kind of maximum in 2000. Fig. 4 compares the effect of reviewer's priority on the impact factors of 1999 and 2000. Both curves are separated by 0.50 (3.09 for 1999 and 3.59 for 2000) when the complete contents are considered and by 0.77 when only papers with 100% priority are considered (4.33 for 1999 and 5.10 for 2000). Both curves indicate that the advice of reviewer's is very helpful when editors aim at improving the impact factor of their journal. The potency of our journal in terms of impact factor is getting closer and closer, but not yet equal to the impact factor of the three top journals in the cardiovascular category with top impact factors between 7.00 and 9.50. Bridging this gap further remains our aim, but we can only succeed when our authors permit us to select their very best work, as we stated previously [4].

References

- [1] Moed HF, Van Leeuwen ThN, Reedik J. A new classification system to describe the ageing of scientific journals and their impact factors. *J Document* 1998;54:387–419.
- [2] Ophof T, Coronel R, Janse MJ. on behalf of the Editorial Team. Where do our reviewers come from? *Cardiovasc Res* 2000;46:1–13.
- [3] Coronel R, Ophof T. The role of the reviewer in editorial decision-making. *Cardiovasc Res* 1999;43:261–264.
- [4] Ophof T, Coronel R, Janse MJ. on behalf of the Editorial Team. Reviewer's recommendations predict impact: why you have to send us your very best work? *Cardiovasc Res* 2000;48:1–3.