

Conversion of abstract to peer-reviewed publication at the European Society of Cardiology Congress Young Investigator Award: a comparison of winners and non-winners

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Introduction

The European Society of Cardiology's (ESC) annual Scientific Session hosts a Young Investigator Award (YIA) competition which is a recognized platform for young researchers (35 years old or less) who seek to take the next step into their research-career.

Up until this point there has been no data published on the conversion rate from abstracts presented at the YIA to peer-reviewed published papers and differences between winners and non-winners. Further, it is unknown whether winners publish in more recognized journals as compared with non-winners. The primary aim of this study was to investigate the difference in conversion rate from abstract to peer-reviewed article among presenters at the YIA for winners and non-winners. Further, to examine differences in impact factor among published articles for winners and non-winners at the YIA.

Methods

All abstracts presented at the ESC congress in the period from 2016 to 2020 were assessable on the official ESC website.¹ The MEDLINE database was used to identify peer-reviewed published papers presented at the YIA.

The articles were identified by cross-linkage of titles, affiliation, and author-name with a maximum of 2 years from abstract presentation to potential publication. The 2022 IF of journals was assessed through the journal's official website. The difference in conversion rate within 2 years of abstract presentation between winners and non-winners was tested using the χ^2 -test and the difference in impact factor was examined using the Kruskal Wallis test.

Results

We identified 117 abstracts in the period from 2016 to 2020, with 30 winners (25.6%) and 87 non-winners (74.4%). Females represented 30% ($n = 9$) of winners and 25.3% ($n = 22$) of non-winners ($P = 0.61$ for difference). A total of 86 (73.5%) of the abstracts were published as a full-text, original article in a journal within the first two years from abstract presentation with a conversion rate of 76.7% ($n = 23$) for winners and 72.4% ($n = 63$) for non-winners ($P = 0.81$ for the difference between groups). Winners published in journals with a median IF of 15.2 (25 and 75 percentiles: 5.6–22.7) and a mean IF of 14.8, while the median IF for non-winners was 9.0 (25 and 75 percentiles: 5.2–22.7) and a mean IF of 13.0 ($P = 0.35$ for the difference between groups, [Figure 1](#)).

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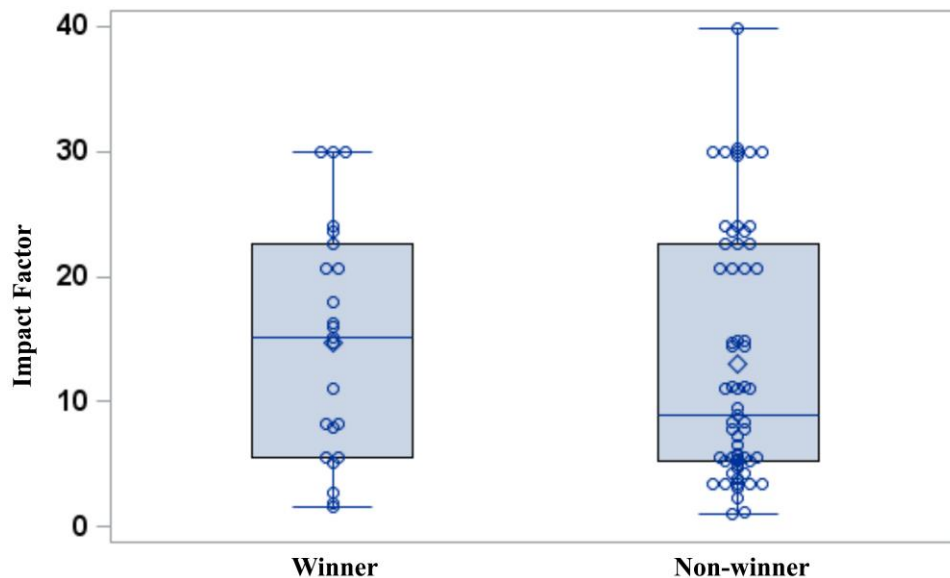


Figure 1 Journal impact factor for winners and non-winners of the YIA. The figure shows the journal impact factor for winners and non-winners. The box-plot illustrates the minimum and maximum value, the 25 and 75 percentile, and the median. The rhombus is an indication of the mean value.

Examining the conversion rate stratified by research topic, we found that the highest conversion rate was within valvular heart disease (100.0%, $n = 9$) followed by venous thromboembolism (87.5%, $n = 7$), 'Other research topic' (83.3%, $n = 5$), arrhythmia (75.0%, $n = 15$), chronic heart failure (70.6%, $n = 12$), acute cardiac care (66.6%, $n = 8$), congenital heart disease (66.6%, $n = 2$), and ischaemic heart disease (66.6%, $n = 28$).

Discussion

A study examining abstracts presented at the Canadian Cardiovascular Congress showed that abstracts presented between 2006 and 2010 had a conversion rate of 24.1% into full-peer-reviewed articles.² The difference in conversion rate from previous papers and our data most likely is related to the already highly selected abstracts presented at the YIA, which is also indicated by the median IF of 15.2 among winners as compared with a mean impact factor of 5.2 from the abstracts examined from the Canadian Cardiovascular Congress.² The comprehensive process of accepting and rejecting abstracts will likely increase the likelihood of a full publication as compared with the Canadian Cardiovascular Congress, however, the quality of the abstracts submitted to the different congresses was not known.

It would be expected that accepted abstracts got published in more acknowledged journals than rejected abstracts, which is also underlined by previous literature.³ Unfortunately, we were not able to assess this matter as rejected abstracts were not available. However, a German thesis examined accepted and rejected abstracts submitted to the annual meeting of German Cardiac Society and found that accepted abstracts were published in journals with higher IF.³

We found no statistically significant difference in IF among published abstracts for winners and non-winners although there was a difference in median IF of 6.2 between winners and non-winners. A likely reason may be that abstracts presented at the YIA already are highly selected and present high-impact research. On the other hand, the data material may have been with too small numbers to detect differences. Although the IF is an easily usable tool in

ranking journals it does not assess specific scientific measures or imply clinical impact.⁴

Conclusion

This study examined the conversion rate of results presented at the YIA, ESC congress to peer-reviewed articles. We identified a conversion rate of around 75% for both winners and non-winners. For presenters who published, we found no statistically significant difference in journal IF between the two groups. Research presented at the ESC, YIA is highly selected and the results should be interpreted in this light.

Lead author biography



Matthias Bak Søndergaard, MB, is currently finishing his master in medicine at Copenhagen University, Denmark. With an interest in cardiology, he has had several clinical stays in cardiac departments in hospitals in the capital of Denmark. He is now searching for his next project and with his interest in patients with heart failure, his next work might be to investigate the treatment for these patients. This is his first published work as a young investigator.

Data availability

Data can be shared upon request.

Conflict of interest: Matthias Søndergaard: none. Emil Fosbøl: Novo Nordisk Foundation and the Danish Heart Association: Independent research grant related to valvular heart disease and endocarditis. Johannes

Grand: none. Lars Køber: Speakers honorarium from Novo, Novartis, AstraZeneca, Boehringer and Bayer. Lauge Østergaard: none.

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