

Conversion Rate of Abstracts Presented at the Société Internationale d'Urologie into Peer-Reviewed Journal Publications

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Abstract

Objectives The objective of this study was to determine the publication rate of abstracts presented at the Société Internationale d'Urologie (SIU) Congress and to analyse the characteristics associated with conversion to publication.

Methods All abstracts from the 36th Congress of the Société Internationale d'Urologie were identified from the published 2016 abstract book. A PubMed search was performed using key words and author names to identify published journal articles corresponding with the presented abstracts.

Results The conversion rate of presented abstracts to publication by April 2022 was 30.73% (224 of 729). Many abstracts were published prior to presentation (35.27%, 79 of 224). The average time to publication of abstracts published post presentation was 16.88 months. The majority of abstracts were presented in urology-specific journals (66.96%, 150 of 224). Publishing journals had an average impact factor of 3.068 with *Urology* (18 of 224) and *World Journal of Urology* (8 of 224) being the most common journals. Moderated ePosters had the highest conversion rate to publication (39.59%), whilst Unmoderated Videos had the lowest (11.32%). The abstract book assigned presentation topic groups to the moderated ePoster category; the most published abstract topic was sexual function (68.75%, 11 of 16).

Conclusions The conversion rate of abstracts presented at the SIU to publications in peer-reviewed journals has shown improvement since previous reports; however, it remains lower than the rates associated with other major urological conferences. Almost 70% of presented abstracts do not convert to publication and this should be considered when incorporating abstract findings into clinical practice.

Introduction

Conference abstracts are an important repository of novel research for the medical community. Progression of abstracts to publication in peer-reviewed journals is an indicator of abstract validity and the quality of a conference. The peer review process has become the benchmark of validation for medical research[1]. This is likely due to the full text and results made available for assessment during the peer review process for publication allowing more thorough and accurate assessment[1,2]. The International Committee of Medical Journal Editors has recommended against using abstract findings as references in their 1997 publication: *Uniform requirements for manuscripts submitted to biomedical journals*[3]. Previous studies performed over 10 years ago indicate the publication rate from Société Internationale d'Urologie (SIU) abstracts to be less than 25%[4]. The objective of this study was to determine the publication rate of abstracts presented at the SIU in more recent times and to analyse the characteristics associated with conversion to publication.

Key Words

Journal impact factor, meeting abstract, peer review, research, urology journal, publication, urology

Competing Interests

None declared.

Article Information

Received on January 28, 2023
Accepted on May 20, 2023
This article has been peer reviewed.

Soc Int Urol J. 2023;4(6):448–453
DOI: 10.48083/BMTE3555

Methods

All abstracts from the 36th Congress of the Société Internationale d'Urologie were identified from the 2016 abstract book published as a supplement in the *World Journal of Urology*, the official journal of the SIU at the time[5]. The 2016 annual Congress was chosen to allow for analysis of a period of more than 5 years. The rationale for this period was to avoid underestimation of publication rates and to allow for a time to publication assessment. The search was performed between 1 and 10 April 2022.

A single author performed a PubMed database search using key words and author names to identify published journal articles corresponding with the abstracts. A sequential search strategy was employed. A search was first performed with abstract title key words combined with the first author's name. All publications identified were retrieved in full text and scanned for correspondence to the abstract. A match was defined as a publication with one or more authors in common and at least one common aim, methodology or finding. If no match was found, the search was repeated using the second author's name followed by third author's name, and finally by the last author's name to maximise capture of publications converted from the abstracts.

Characteristics of published abstracts were recorded in a spreadsheet using Excel 2022 for data analysis. The abstract categories published were Moderated ePosters, Unmoderated ePosters, Unmoderated Videos, and Residents' Forum (moderated). The Moderated ePosters category was organized by topic sessions. Characteristics recorded were country of origin by first author affiliation, conversion to publication, date of publication, journal of publication, and the 2021 impact factor of publishing journals cited in the *2022 Journal Citation Report*[6]. Publishing journals were assessed separately as urology-specific and non-urology-specific by cross checking journal classification by MeSH terms in the *National Library of Medicine*[7].

Results

In total, 729 abstracts were presented at the 36th Congress of the Société Internationale d'Urologie, held in Buenos Aires in 2016, across all categories (Moderated ePosters, Unmoderated ePosters, Unmoderated Videos, and Residents' Forum). The overall conversion rate of abstracts to peer-reviewed journal articles by April 2022 was 30.73%, with 224 of the 729 published in the 5 years and 5 months since presentation.

Time to presentation analysis was performed by calculating the conversion rate of unpublished abstracts to publication per year since presentation. Many abstracts were published prior to presentation (35.27%, 79 of 224) (**Figure 1**). Most abstracts converted

to publication in the assessed period were converted within 3 years from presentation (91.07%, 204 of 224) (**Figure 1**). There was a steady decline in the conversion rate of abstracts after 24 months, with few abstracts published after 48 months had lapsed since presentation (**Figure 2**). The average time to publication of abstracts published post presentation was 16.88 months.

The average impact factor of publishing journals was 3.068. Most publishing journals were urology-specific (66.96%, 150 of 224) (**Online Supplementary Table 1**) rather than non-urology-specific (33.04%, 74 of 224) (**Online Supplementary Table 2**). The most common journal of publication was *Urology* (18 of 224) followed by *World Journal of Urology* (8 of 224), *International*

FIGURE 1.

Nominal conversion to publication per year

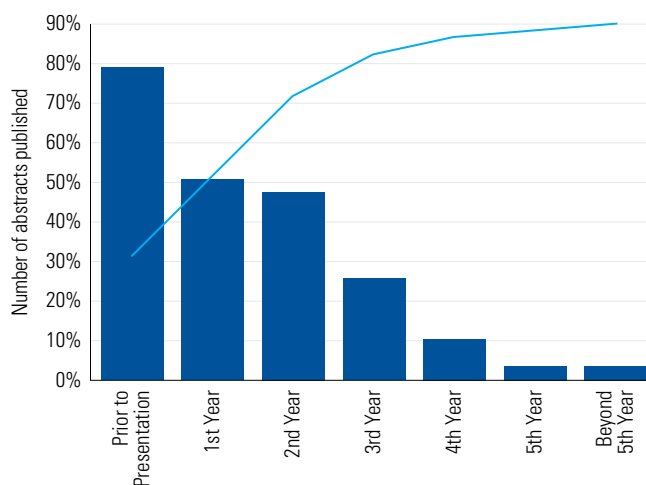
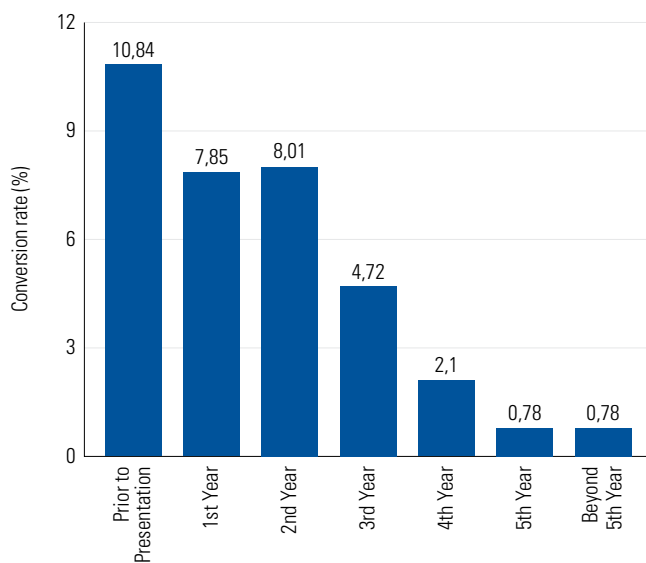


FIGURE 2.

Percentage rate of conversion to publication per year



Brazilian Journal of Urology (7 of 224), and *International Urology and Nephrology* (7 of 224). Notably, the journals with the highest number of publications were all urology specific. The average impact factor for the urology-specific journals was 2.752 compared with 3.995 for the non-urology-specific journals.

Abstracts originated from 54 countries, with the highest contributing countries by number being Korea (90 of 729), the United Kingdom (76 of 729), and the United States of America (75 of 729) ([Online Supplementary Table 3](#)). [Table 1](#) lists the publication rates by continent.

On analysis by abstract category, Moderated ePosters had the highest conversion rate to publication (39.59%), whilst Unmoderated Videos had the lowest (11.32%). Unmoderated ePosters and Residents' Forum had a conversion rate of 26.69% and 25.93% respectively. The publishing journals of abstracts from the Residents' Forum had the lowest average impact factor (2.094). The few Unmoderated Videos that did convert to publication did so in journals with an average impact factor of 3.924, the highest out of the 4 categories. Interestingly, Unmoderated Videos and Residents' Forum, the 2 categories with the lowest total number of abstracts and the lowest number of abstracts published by number, had the shortest time to publication (14.5 months and 11.5 months, respectively) ([Table 2](#)).

A sub analysis of the Moderated ePoster category was performed by the topics assigned to them in the abstract book. The topic area with the highest conversion rate to publication was sexual function (68.75%, 11 of 16) followed by benign prostatic hypertrophy/lower urinary tract symptoms (55%, 10 of 18), and basic sciences (53%, 8 of 15) ([Table 3](#)).

Discussion

The conversion rate of abstracts presented at the 36th Congress of the Société Internationale d'Urologie was higher than the conversion rate estimated for Congress abstracts over 10 years earlier. Auterino et al. estimated the conversion rate of the 2002 and 2004 meetings to be 22.1% over a 3-year period[4]. When we adjusted for this shorter time period, we found the 2016 meeting to have a conversion rate of 27.98% by 3 years compared with 30.73% by 5 years and 5 months. This represents a smaller but likely true increase in conversion rate to publication and highlights the small number of abstracts that continue to convert to publication beyond the commonly investigated time frame of 3 years.

Despite the improvement in conversion rate to publication, the current rate is still low compared with other major urological conferences. Previous estimates for the AUA 2000 meeting and the EAU 2000 and 2001 meetings over comparative 5-year periods found abstract conversion to publication rates of 55% and 47.3%

TABLE 1.

Number of abstracts and conversion to publication by continent of origin

Continent	No. of Abstracts (% of total abstracts)	No. Published (% of total published abstracts)	Conversion Rate (%)
Asia	217 (29.77)	75 (33.48)	34.56
Europe	179 (24.55)	52 (23.21)	29.05
North America	93 (12.76)	37 (16.52)	39.78
Africa	88 (12.07)	11 (4.91)	12.50
Middle East	69 (9.47)	28 (12.50)	40.58
South America	64 (8.78)	15 (6.70)	23.44
Oceania	16 (2.19)	6 (2.68)	37.50

TABLE 2.

Number of abstracts and conversion to publication by continent of origin

Abstract category	Conversion by number	Conversion rate (%)	Average impact factor	Average time to publication (months)
Moderated ePosters	116 out of 293	39.59	3.1513	18.84
Residents' Forum	7 out of 27	25.93	2.0935	11.5
Unmoderated ePosters	95 out of 356	26.69	3.104	22.68
Unmoderated Videos	6 out of 53	11.32	3.9235	14.5

TABLE 3.

Moderated abstract conversion to publication by Congress assigned topic areas

Topic	Conversion by number	Conversion rate (%)
Minimally invasive surgery	2 out of 18	11.1
Adrenal, kidney & ureter	6 out of 14	42.9
Reconstruction and trauma I	4 out of 17	23.5
Stones I	8 out of 18	44.4
Urinary incontinence	7 out of 19	36.8
Pediatric urology	8 out of 18	44.4
Prostate cancer – various topics	7 out of 16	43.8
BPO/LUTS	10 out of 18	55.6
Kidney & ureteral cancer – various topics	5 out of 12	41.7
Prostate cancer – detection & screening	3 out of 17	17.6
Reconstruction and trauma II	6 out of 19	31.6
Basic science	8 out of 15	53.3
Kidney & ureteral cancer – treatment	5 out of 14	35.7
Prostate cancer – advanced & localized disease	6 out of 18	33.3
Infections & inflammatory diseases	6 out of 14	42.9
Bladder cancer	6 out of 14	42.9
Sexual function & dysfunction	11 out of 16	68.8
Stones II	8 out of 16	50.0

respectively[1,2]. We draw comparison by total abstracts only, as we acknowledge the differences in abstract categorisation across conferences. Analysis of the EAU 2000 and 2001 meetings excluded video sessions. If Unmoderated Videos are excluded from our analysis, the SIU Congress abstract publication rate rises from 30.73% to 32.25%.

The moderated abstract category had the highest conversion rate to publication. This may reflect a more critical evaluation of abstract content and quality for moderated live presentations compared with those for unmoderated display only. The Residents' Forum had a similar conversion rate to the unmoderated category. The 2019 trainees and young urologists page describes the Residents' Forum as a session led by young urologists to allow open discussion and debate in a friendly setting[8].

The outlier category was Unmoderated Videos, from which few abstracts converted to publication. This is likely a result of the video format being less conducive to conventional publication[1]. Nonetheless, video abstracts are gaining in popularity and prevalence

with the increasing digitalisation of media presentation, and possibly spurred on by the online-centric COVID era. More recent SIU meetings now include not only unmoderated video sessions but also moderated video sessions[9]. Some journals have since launched video-specific specialist journals such as the *Urology Video Journal*, published since 2019[10].

The average time to publication for abstracts published post presentation was 16.88 months. Most abstracts destined for publication were publication by 3 years post conference presentation (91.07%, 204 of 224). This is in keeping with the findings of other studies[1,2,11]. The publication rate per year significantly declines after 2 years from presentation, with a rate of less than 1% after 4 years. An abstract that has not been developed into a paper and published in a peer-reviewed journal 3 years after its presentation at a conference is unlikely ever to be published.

Alarmingly, 79 of the 224 abstracts converted for publication had been converted before the conference. This is a circumvention of the ethos of annual scientific meetings which typically aim to present new and novel research. The 2022 SIU Congress abstract guidelines describe the SIU Congress as a forum for novel findings and stipulate research must not have been published prior to presentation[9]. This is a surprising finding that proves to be a recurring issue for scientific meetings, with Hoag et al. similarly reporting publications to have occurred prior to presentation for the 2000 AUA annual meeting[1]. This may indicate the need for a dedicated process of cross checking for prior publication if meetings are to continue to truly showcase novel findings for attendees.

Most journals that accepted SIU Congress 2016 abstracts were urology specific. Either the authors submitted primarily or only to urology journals, or they submitted more widely but were accepted mostly or solely by urology journals. The latter seems more likely, given that the *Urology* and *World Journal of Urology*, which published most of the papers, were respectively the previous official journal and the official journal of the SIU at the time of presentation. The average impact factor of accepting journals was 3.068, moderated by the lower impact factor of the urology-specific journals of 2.752. This can be explained by the narrower audience for urology journals rather than general medical journals[1,6].

The topic area with the highest conversion rate to publication in the 2016 Moderated ePoster category was sexual function compared with kidney cancer in the 2002 and 2004 SIU meetings[4]. Similar investigations of other urological meetings also report different topic areas to have the highest publication rate, such as ESWL

and UTI in the 2000 and 2001 EAU meetings[2]. These varied reports suggest abstract topic does not appear to correlate with conversion to publication.

We found abstracts at the SIU meeting originated from 54 countries, with 19 countries contributing more than 10 abstracts each (Online Supplementary Table 3). No single continent contributed more than 30% of the total abstracts (Table 1). This is a positive indicator of international participation and appears to be a long-standing feature of the SIU Congress, with a range of global authorship similarly demonstrated on investigation by Auterino et al. over a decade ago[4].

Our investigation attempted to create a comprehensive estimate of the conversion to publication rate of SIU Congress abstracts with an expanded time of over 5 years and inclusion of all abstract types. A limitation of our investigation is that the search was performed solely through PubMed, capturing all indexed journals in the Medline database, PubMed Central, and Bookshelf[12]. This search would have missed publication in journals not indexed in these National Library of Medicine (NLM) resources and consequently underestimated the conversion rate. Notably, the *SIUJ*, the official journal of the SIU, is still undergoing the requirements to qualify for indexing in Medline. Another limitation is that the search strategy does not account for the possibility of misspelt or omitted author names in the abstract book, and this could again have resulted in missed publications.

Despite improvement in conversion rate to publication for SIU Congress abstracts, most abstracts are not converted to publications, and the publication rate remains lower than the rate for other major urological meetings. Reasons for failure to publish are heterogeneous[1,2,13,14]. Weber et al. reports the most reported reason for failure to publish to be “not enough time”[13]. Another reason may be that some authors have no intention to publish with training pathways incentivising abstract presentation by way of recognition on curriculum vitae or through concessions for travel[2,11,14,15]. In addition to failure to complete or submit abstract research for publication is the possibility that the unpublished abstract research was rejected on peer review for publication[5]. The peer review process has undoubtedly become the gold standard qualifier for publication of research, and thus an indirect marker of the quality of the research[1]. Failure to publish casts doubt on the validity of the unpublished research and should prompt caution in referencing or incorporating the findings into clinical practice.

The notion of an abstract being accepted for presentation at meetings but a paper developed from that abstract being rejected for publication on peer review

also calls into question the systemic issue of publication bias and its possible implications here. A recent investigation on the rate of positive studies in the urological literature reported that 86% of studies published in 5 major urological journals reported positive findings in 2017[16]. The contents of research abstracts are much briefer and less descriptive than the full text and results submitted to journals for peer review[1,2]. This creates room for selective or distorted reporting and curtails the review process for conference acceptance[17].

We must also consider the possibility of reviewer bias or bias with respect to the low level of resources available to research groups may affect publication rates[4]. The SIU Congress lends itself to a diversity of abstract author origin with participation of authors from regions where language or a lack of research funding may present barriers. This contrasts with other major urological conferences where the authors of most abstracts presented are from the area covered by the society organizing the conference. Analysis of abstracts from the AUA 2000 meeting found 65% of abstracts originated from North America whilst 74.2% of abstracts at the EAU 2000 and 2001 meetings were European[1,2]. This is a possible explanation for the lower conversion rate of abstracts presented at the SIU to publication.

Conclusions

The conversion rate of abstracts presented at the 36th Congress of the Société Internationale d’Urologie in 2016 was higher than in reports from over a decade earlier. Despite the improvement, the conversion rate remains lower than those for other major urological conferences. Almost 70% of abstracts fail to convert to publication in a peer-reviewed journal by 5 years and 5 months from time of presentation. This should be considered before referencing presented findings or applying them to clinical practice. The majority of abstracts that do convert to publication do so within 3 years. We recommend particular caution when assessing abstract research unpublished more than 3 years after presentation.

Acknowledgements

Funding: The authors declare no funding.

Data Availability Statement: The data sets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Ethics Statement: This investigation was performed following the principles of the Declaration of Helsinki. Ethics Committee approval was not required as the study did not involve human participants or animal care or use.

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