

## Investigative Urology

# Fate of Abstracts Presented at the Annual Meeting of the Korean Urological Association

Jae Hoon Chung, Riccardo Autorino<sup>1</sup>, Dong Hyuk Kang, Joo Yong Lee<sup>2</sup>, Hong Sang Moon, Hong Yong Choi, Seung Wook Lee

Department of Urology, Hanyang University College of Medicine, Seoul, Korea; <sup>1</sup>Section of Advanced Laparoscopy and Robotics, Glickman Urological and Kidney Institute, Cleveland Clinic, Cleveland, OH, USA; <sup>2</sup>Department of Urology, Urological Science Institute, Yonsei University Health System, Seoul, Korea

**Purpose:** The acceptance rate for journal publication of the abstracts presented at the annual Korean Urological Association (KUA) meeting, the time to publication, and the effect of abstract characteristics on the publication pattern were analyzed and compared with data for abstracts from other major urological meetings.

**Materials and Methods:** A total of 1,005 abstracts listed in the abstract books of the 2006 (58th) and 2007 (59th) annual KUA meetings were analyzed, and their subsequent publication as listed in PubMed or KoreaMed between August 2006 and August 2011 was evaluated.

**Results:** A total of 41.59% of abstracts were published as full-length reports. Abstracts on sexual dysfunction, neurourology, prostate cancer, basic research, and benign prostatic hyperplasia showed the highest publication rates (54%, 52.27%, 48%, 47.56%, and 45%, respectively). It took 19.01±12.83 months on average for abstracts to be published in a journal, whereas it took 25.24±14.64 months and 17.51±11.89 months for publication in foreign and Korean journals, respectively ( $p < 0.001$ ).

**Conclusions:** Approximately 40% of studies presented as abstracts at the KUA meeting are subsequently published as full-length articles. The *KJU* is the most targeted journal. The mean time to publication is 1.5 years, and publication seems to be influenced by the study subject.

**Key Words:** Abstracts; Journal article; Peer review, research

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### Corresponding Author:

Seung Wook Lee  
Department of Urology, Hanyang University College of Medicine, 153 Gyeongchun-ro, Guri 471-701, Korea  
TEL: +82-31-560-2374  
FAX: +82-31-560-2372  
E-mail: [swleepark@hanyang.ac.kr](mailto:swleepark@hanyang.ac.kr)

## INTRODUCTION

The annual Korean Urological Association (KUA) meeting held every fall is an important opportunity for urologists and related health care professionals in Korea to improve their knowledge of medical science through exchange of the latest medical experiences and scientific information. In particular, because abstracts accepted at the meeting contain the condensed experience and knowledge of authors, they play a role as an important medium for the exchange of information. Moreover, abstracts are published as journal articles not only in the *Korean Journal of Urology (KJU)* but in medical journals throughout the world; accordingly,

they provide information that could lead to the sharing of medical knowledge. The process of publishing abstracts as journal articles includes the collection and analysis of clinical information, preparation of manuscripts through statistical analysis of data, and peer review. This process also significantly contributes to the exchange of information in medical science [1]. In other words, medical abstracts published as journal articles play an important role in the development of medicine. However, many abstracts are not published as journal articles owing to problems such as a lack of data or statistical limitations. According to a recent Cochrane Library review of 46 studies, only 45% of abstracts are published as journal articles [2]. Until now, only

a few studies have been conducted regarding abstracts accepted at foreign urological associations and then published as journal articles. In one such study, Ng et al. [3] analyzed abstracts released at the American Urological Association (AUA). According to their analysis, the overall publication rate was 37.8%, and most of the abstracts were published as journal articles within 2 years. According to another study by Autorino et al. [4] the overall publication rate of the abstracts presented at the European Association of Urology was 47.3%, and the abstracts were published within approximately 2 years. No survey regarding the publishing of abstracts released at the KUA or the time required for publication has yet been conducted. The present study therefore investigated the publishing rate of abstracts released at previous annual KUA meetings, the time required for publication, and the effect of abstract characteristics on subsequent publication. Moreover, a comparison with reports from other major urological meetings was done.

## MATERIALS AND METHODS

### 1. Data collection

A total of 1,005 abstracts listed in the abstract catalogs of the 2006 (58th) and 2007 (59th) annual KUA meetings were analyzed. Abstracts were classified by subject listed in the catalog (benign prostatic hyperplasia, incontinence and female urology, prostate cancer, urothelial cancer, basic research, renal surgery, sexual dysfunction, laparoscopic surgery, pediatrics, neurourology, infertility, infection, kidney cancer, stone disease, surgical technique, prostate surgery, trauma, endourology, and other subjects), and the titles of the abstracts, key words, names of speakers and participants, and names of hospitals or institutes were recorded. All abstracts listed in the catalog were included in the present study.

### 2. Assessment of subsequent publication

One urologic resident and one urologist independently evaluated whether the journal articles listed in PubMed and KoreaMed between the period of August 2006 and August 2011 were published from conference abstracts via the internet. Both doctors searched the abstracts by using broad key words of abstract titles, names of schools or hospitals, and authors. Any discrepancies in search results between the two doctors were evaluated and confirmed. Only original articles other than letters, reviews, and editorials were considered. When author, title, study design, and result of the abstract coincided with the journal article, the case was confirmed to be "published". Even if the result portion of an abstract did not coincide with the journal article, the case was also considered "published", if the author and study design coincided with those of the journal article. When the abstract was considered "published", the name of the journal and month and year of publication were recorded.

### 3. Data analysis

The percentage of abstracts that were subsequently published as journal articles was calculated. In addition, the ratio of publication was analyzed by subject by using logistic regression. To determine the time elapsed before publication as a journal article, Gehan's generalized Wilcoxon analysis was used. For data analysis and statistical treatment, Open Office.org Calc (Open Office.org ver. 3.2.0, Oracle Co., Redwood Shores, CA, USA) and MedCalc (MedCalc ver. 11.2.1.0, MedCalc Software, Mariakerke, Belgium) were used. In the statistical analysis, statistical significance was recognized when the p-value was less than 0.05.

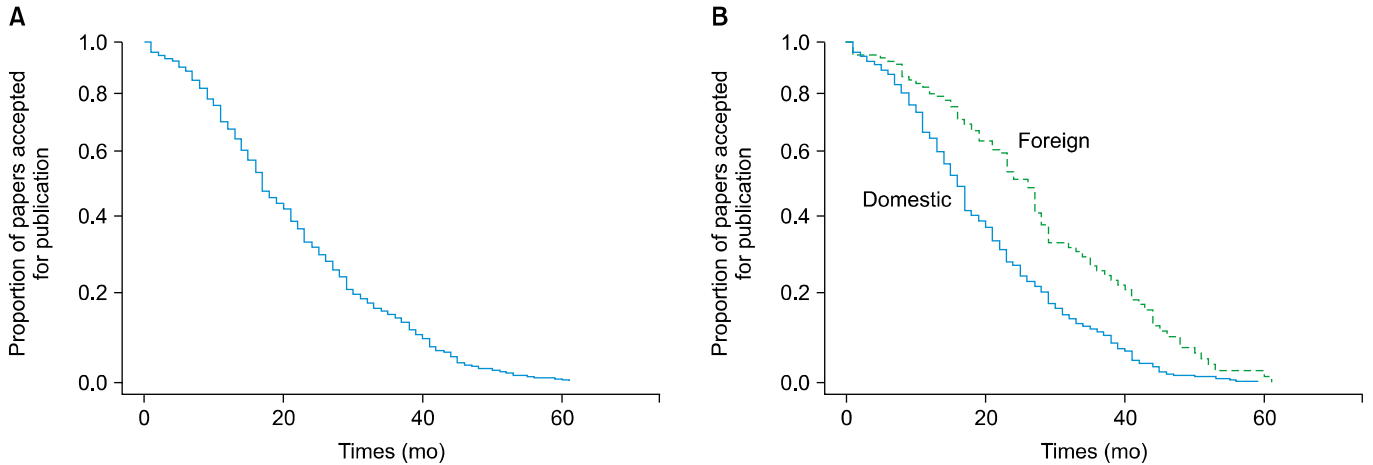
## RESULTS

A total of 1,005 abstracts were released at the 2006 and 2007 annual KUA meetings. Of the 1,005 abstracts, 421 (41.59%) were published as study reports. The mean time elapsed before publication was 19.01 months (SD, 12.83). A total of 297 (70.55%) abstracts were published as journal articles within 2 years, and only 10 (2.38%) abstracts were published over 4 years after their release. The longest time that elapsed before publication was 60 months. In addition, the mean time that elapsed before publication in foreign journals was longer than that for publication in Korean journals ( $25.24 \pm 14.64$  months compared with  $17.51 \pm 11.89$  months, respectively,  $p < 0.001$ ) (Fig. 1). Most of the abstracts (242, 57.48%) were published in the *KJU*, and 339 abstracts (80.52%) were published in domestic journals including the *KJU* (Fig. 2). According to subject, 100 abstracts on benign prostatic hyperplasia, 68 on incontinence and female urology, 124 on prostate cancer, 56 on urothelial cancer, 82 on basic research, 20 on renal surgery, 87 on sexual dysfunction, 68 on laparoscopic surgery, 69 on pediatrics, 44 on neurourology, 24 on infertility, 44 on infection, 44 on kidney cancer, 43 on stone disease, 27 on surgical technique, 17 on prostate surgery, 23 on trauma, 22 on endourology, and 44 on other subjects were later published as journal articles. As mentioned above, abstracts on sexual dysfunction, neurourology, prostate cancer, basic research, and benign prostatic hyperplasia showed high publication rates (54.02%, 52.27%, 48.39%, 47.56%, and 45.00%, respectively), with odds ratios of 3.13 ( $p=0.004$ ), 2.92 ( $p=0.018$ ), 2.50 ( $p=0.017$ ), 2.42 ( $p=0.029$ ), and 2.18 ( $p=0.048$ ), respectively (Table 1).

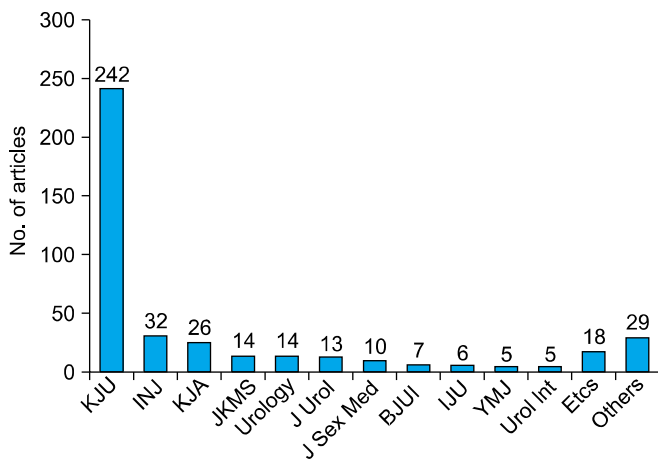
## DISCUSSION

A total of 41.89% of abstracts released at the 2006 and 2007 annual KUA meetings were found in PubMed or KoreaMed as full-length articles. The rate of publication and the time elapsed before publication in the present analysis compares favorably with findings from other similar studies for other major meetings [3-11] (Table 2).

Clinical experiences and clinical information obtained from research are released in abstract form at conferences.



**FIG. 1.** Gehan's generalized Wilcoxon analysis of the publication rate as the time elapsed after the abstracts were presented (A) and the publication rate in domestic and foreign journals (B).



**FIG. 2.** Journals in which abstracts of the KUA annual meeting were published. KJU, Korean Journal of Urology; INJ, International Neurourology Journal; KJA, Korean Journal of Anesthesiology; JKMS, Journal of Korean Medical Science; J Urol, The Journal of Urology; J Sex Med, Journal of Sexual Medicine; BJUI, British Journal of Urology International; IUJ, International Journal of Urology; YMJ, Younsei Medical Journal; Urol Int, Urologia Internationalis; etc, other urology journals; Others, non-urology journals.

Meanwhile, publication in peer-reviewed journals is necessary so that clinical information is transferred to and reviewed by medical scientists all over the world. However, some abstracts are not published as journal articles for various reasons [12]. Releasing abstracts at a conference is known to be easier than publishing the research as a journal article because no peer-review process is required for abstract release. Moreover, to publish abstracts as journal articles, medical scientists must meticulously collect and analyze data, as well as prepare manuscripts. All these processes are time-consuming, and therefore publishing abstracts as journal articles is often not realized [13]. Moreover, abstracts usually lack the necessary detail for

readers to critically appraise a given study for its validity, impact, and generalizability. Therefore, some unqualified abstracts released at a conference that have defects in data, methods, or results may have difficulty getting published [14]. As explained above, medical scientists spend much time and effort transforming abstracts into journal articles for publication. Upon learning the release rate of abstracts published as journal articles, medical scientists may become more motivated.

According to the present study, more than half of the abstracts released at the annual KUA meeting were published in the *KJU*, a journal of the KUA. Up to 2009, the *KJU* accepted study reports written in the Korean language, providing authors with easy access in terms of language and resulting in a high rate of inclusion. Because the *KJU* began accepting English study reports in 2010, several changes in the rates found in the present study are expected in the future.

According to the study conducted by Autorino et al. [6] on the World Congress of Endourology, most of the abstracts were published as study reports within 2 years, and the longest time spent for publication was 40 months. Another study conducted by Smith et al. [9] on the AUA showed 27.8 months (range, 25.9 to 39.7 months) as the mean time for publication. Considering these results, a 4-year period was thought to be sufficient for publishing abstracts as journal articles; thus, in the present study, the abstracts released in 2006 and 2007 were analyzed. The results of the present study are similar to the results of the above-mentioned studies.

According to the present study, when comparing the time elapsed for publication of study reports in foreign versus domestic journals, the former was longer than the latter due to the language barrier when publishing in foreign journals and the faster correspondence of domestic journals. Many practitioners and researchers propose to use the impact factor (IF) as a valid indication for measuring the quality of journals [15]. The value of a journal and the IF are

**TABLE 1.** Publication rates per study subject

Subject	No. of abstracts	No. of published abstract (%)	Odds ratio (CI)	p-value
BPH	100	45 (45.00)	2.18 (1.01, 4.72)	0.048
Incontinence & female urology	68	29 (42.65)	1.98 (0.87, 4.50)	0.101
Prostate cancer	124	60 (48.39)	2.50 (1.18, 5.30)	0.017
Urothelial cancer	56	26 (46.43)	2.31 (0.99, 5.39)	0.052
Basic research	82	39 (47.56)	2.42 (1.10, 5.34)	0.029
Renal surgery	20	4 (20.00)	0.67 (0.19, 2.40)	0.535
Sexual dysfunction	87	47 (54.02)	3.13 (1.43, 6.88)	0.004
Laparoscopic surgery	68	22 (32.35)	1.28 (0.55, 2.94)	0.568
Pediatric	68	29 (42.65)	1.98 (0.87, 4.50)	0.101
Neurourology	44	23 (52.27)	2.92 (1.20, 7.10)	0.018
Infertility	24	11 (45.83)	2.26 (0.80, 6.39)	0.126
Infection	44	20 (45.45)	2.22 (0.91, 5.41)	0.079
Kidney cancer	44	15 (34.09)	1.38 (0.56, 3.43)	0.489
Stone disease	43	20 (46.51)	2.32 (0.95, 5.67)	0.065
Surgical technique	27	5 (18.52)	0.61 (0.19, 1.97)	0.404
Prostate surgery	17	1 (5.88)	0.17 (0.02, 1.40)	0.099
Trauma	23	4 (17.39)	0.56 (0.16, 1.99)	0.371
Endourology	22	9 (40.90)	1.85 (0.63, 5.43)	0.265
Others	44	12 (27.27)	-	-
Total	1,005	421 (41.89)		

CI, confidential interval; BPH, benign prostate hyperplasia.

**TABLE 2.** Published papers on urological meetings assessing abstract full publication rate

Author	Year	Meeting	Published abstracts (%)	Mean time to publication (mo)
Ng et al. [3]	2004	1998-2000 AUA	37.8	23.2-36.9
Rao et al. [7]	2006	2001-2002 BAUS	42	-
Autorino et al. [6]	2006	2001-2002 WCE	20.5	14.6
Hoag et al. [8]	2006	2000 AUA	55	17
Smith et al. [9]	2007	2002-2003 AUA	44	27.8
Autorino et al. [4]	2007	2000-2001 EAU	47.3	8.6
Cartwright et al. [10]	2007	2003 ICS	61.6	-
Autorino et al. [5]	2008	2002-2004 SIU	22.1	13
Gourtaud and Bruyère [11]	2009	2000-2001 AFU	34.5	16.9
Present series	2011	2006-2007 KJU	41.89	19.01

AUA, American Urological Association; BAUS, British Association Urological Surgeons; WCE, World Congress of Endourology; EAU, European Association of Urology; ICS, International Continence Society; SIU, Société Internationale d'Urologie; AFU, L'Association française d'Urologie; KJU, Korean Journal of Urology.

not the same, but the possibility that the time spent for publication either in foreign or domestic journals is influenced by the IF cannot be excluded.

In addition, as a factor influencing the rate of publication, positive-outcome bias, meaning that positive results tend to be published preferentially over studies with negative findings, cannot be excluded [16]; this variable was not specifically evaluated in the present survey.

To search published articles, PubMed and KoreaMed were used in the present study. PubMed is a tool for searching the Medline database only. Therefore, any published article not in Medline was excluded from the present study. However, Berry et al. [17] reported that a Medline search

for an article on medical imaging was nearly exhaustive. To search articles registered in domestic journals but not registered in the Medline database, KoreaMed was used.

One urologist and one urologic resident independently conducted the searches, and when a discrepancy was present between the results, the search was repeated to reduce errors.

According to subject, the rate of publication as a journal articles was high in the fields of sexual dysfunction and laparoscopic surgery. This result may reflect the possibility that the abstracts with the above-mentioned subjects had a higher scientific quality than the abstracts on other subjects.

The limitations of the present study include the possibility of both searchers missing published articles; consequently, the percentage of abstracts published as journal articles as calculated in the present study may be lower than the actual ratio. Selection bias also cannot be excluded because the numbers of released abstracts varied by subject. Despite these limitations, however, the present study is considered to reflect the current status of the annual KUA meeting and it can be regarded as a suitable method for comparing KUA publications with those of other urological associations.

## CONCLUSIONS

Approximately 40% of studies presented as abstracts at the KUA meeting are subsequently published as full-length articles. The *KJU* represents the most targeted journal. The mean time to publication is 1.5 years, which seems to be influenced by the study subject.

## CONFLICTS OF INTEREST

The authors have nothing to disclose.

## REFERENCES

1. Stolk P, Egberts AC, Leufkens HG. Fate of abstracts presented at five International Conferences on Pharmacoepidemiology (ICPE): 1995-1999. *Pharmacoepidemiol Drug Saf* 2002;11:105-11.
2. Scherer RW, Langenberg P, von Elm E. Full publication of results initially presented in abstracts. *Cochrane Database Syst Rev* 2007;(2):MR000005.
3. Ng L, Hersey K, Fleshner N. Publication rate of abstracts presented at the annual meeting of the American Urological Association. *BJU Int* 2004;94:79-81.
4. Autorino R, Quarto G, Di Lorenzo G, De Sio M, Damiano R. Are abstracts presented at the EAU meeting followed by publication in peer-reviewed journals? A critical analysis. *Eur Urol* 2007;51:833-40.
5. Autorino R, Quarto G, Di Lorenzo G, Giugliano F, Quattrone C, Neri F, et al. What happens to the abstracts presented at the Società Internazionale d'Urologie meeting? *Urology* 2008;71:367-71.
6. Autorino R, Quarto G, Sio MD, Lima E, Quarto E, Damiano R, et al. Fate of abstracts presented at the World Congress of Endourology: are they followed by publication in peer-reviewed journals? *J Endourol* 2006;20:996-1001.
7. Rao AR, Beatty JD, Laniado M, Motiwala HG, Karim OM. Publication rate of abstracts presented at the British Association of Urological Surgeons Annual Meeting. *BJU Int* 2006;97:306-9.
8. Hoag CC, Elterman DS, Macneily AE. Abstracts presented at the American Urological Association Annual Meeting: determinants of subsequent peer reviewed publication. *J Urol* 2006;176(6 Pt 1):2624-9.
9. Smith WA, Cancel QV, Tseng TY, Sultan S, Vieweg J, Dahm P. Factors associated with the full publication of studies presented in abstract form at the annual meeting of the American Urological Association. *J Urol* 2007;177:1084-8.
10. Cartwright R, Khoo AK, Cardozo L. Publish or be damned? The fate of abstracts presented at the International Continence Society Meeting 2003. *Neurourol Urodyn* 2007;26:154-7.
11. Gourtaud G, Bruyère F. What is the publication rate of papers presented at the French Association of Urology annual conferences? *Prog Urol* 2009;19:60-4.
12. Weber EJ, Callahan ML, Wears RL, Barton C, Young G. Unpublished research from a medical specialty meeting: why investigators fail to publish. *JAMA* 1998;280:257-9.
13. Dickersin K, Min YI, Meinert CL. Factors influencing publication of research results. Follow-up of applications submitted to two institutional review boards. *JAMA* 1992;267:374-8.
14. Arrivé L, Boelle PY, Dono P, Lewin M, Monnier-Cholley L, Tubiana JM. Subsequent publication of orally presented original studies within 5 years after 1995 RSNA Scientific Assembly. *Radiology* 2004;232:101-6.
15. Saha S, Saint S, Christakis DA. Impact factor: a valid measure of journal quality? *J Med Libr Assoc* 2003;91:42-6.
16. Callahan ML, Wears RL, Weber EJ, Barton C, Young G. Positive-outcome bias and other limitations in the outcome of research abstracts submitted to a scientific meeting. *JAMA* 1998;280:254-7.
17. Berry E, Kelly S, Hutton J, Harris KM, Smith MA. Identifying studies for systematic reviews. An example from medical imaging. *Int J Technol Assess Health Care* 2000;16:668-72.