

# Publication rate of oral presentations presented at national pathology congresses, 5-year analysis

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## ABSTRACT

**Aim:** In this study, the contribution of the oral presentations presented at national pathology congresses to the literature was investigated.

**Material and Method:** A total of 378 abstracts presented at national pathology congresses between 2014-2018 were scanned in PubMed and Google Academic databases. In order to determine whether these abstracts were obtained from thesis studies, they were scanned in the database of the National Thesis Center. The screening was performed simultaneously with the verbal title and authors. The abstracts were examined in terms of the study design, the type of institution where the study was conducted, whether it was a thesis study, the status of its publication in scientific journals, the type of peer-reviewed journal in which it was published, and the time from presentation to publication.

**Results:** 47.4% (n=179) of 378 papers were retrospective and 52.6% (n=199) were prospective studies. 73.5% (n=278) of the studies of the presentations were done in universities, 23.5% (n=89) in training and research hospitals, and 3% (n=11) in other institutions. 16.9% (n=64) of the abstracts were obtained from the thesis. A total of 27% (n=102) of the abstracts were published in a scientific journal as an article. A significant difference was found in terms of publication in prospective studies compared to retrospective studies (p=0.03). University hospitals had the highest rate (25.5%, n=71). The average period of publication of papers in a scientific journal was 15.0 ±12.3 months (0-68.9) months. 61.8% (n=63) of the abstracts were published in SCI(E) journals, 18.6% (n=19) in other international peer-review journals and 19.6% (n=20) in national peer-review journals.

**Conclusion:** We believe that researchers should develop not only oral presentation but also encouraging methods to transform studies into publications.

**Keywords:** Oral presentation, congress, pathology

## INTRODUCTION

In our country, the National Pathology Congress is an important platform where hundreds of oral and poster presentations are presented every year, and up-to-date information and developments in pathology are conveyed. In these meetings attended by a large number of researchers, there are educational courses for residents and young specialists, and panels where current developments in pathology are also attended by foreign speakers. Scientific congresses are organizations where a large number of researchers come together to strengthen social relations as well as scientific relations. The National Pathology Congress is organized in a different city each year in our country and by a different working group.

Abstracts sent to be presented at the congress usually have a certain word limit. Therefore, the abstracts in the proceedings abstract book contain the main lines of the study. Case selection, method, and statistical analysis cannot be adequately included in the abstracts, and the findings and the results obtained cannot be mentioned in detail. The results of the abstracts that are not published may not reach the potential readership and contribute to the literature adequately (1). The high publication rate of oral presentations presented in scientific congresses is also an indicator of the high scientific quality of the congress (2).

There is no data on the publication rate of oral presentations presented in the National Pathology

Congress in peer-reviewed journals. In this study, we aimed to investigate the publication rate of oral presentations presented at national pathology congresses and their contribution to the literature.

## MATERIAL AND METHOD

In our study, only open access data were used, therefore, ethics committee approval was not required. In similar studies about the publication rate in the literature, an average of 20 months of follow-up period following oral presentations was sufficient for the first results. We included the 5-year national pathology congresses between 2014 and 2018 in our study, and the cut-off date was December 2020. We obtained the abstracts submitted between 2016-2018 from the official website of the Journal of Current Pathology (<http://guncelpatoloji.org/>) and the other years' from the congress abstract books (3). We categorized the oral presentation abstracts according to study design (prospective, retrospective), in which institution the study is done (university hospital, training and research hospital, or others), and whether there was a thesis study. Studies in which the preparations were re-evaluated and studies in the form of file scanning were evaluated as retrospective studies. The case series, reviews, and survey studies were also evaluated as retrospective studies. Evaluations made by taking new sections from paraffin blocks, experimental studies, studies using a new immunohistochemical and histochemical stain, molecular studies using new sections were evaluated as prospective studies. The private hospitals and laboratories and second step government hospitals are grouped as other institutions.

We searched the national thesis center with the name and authors of the study to see if the presented study was a publication produced from the thesis of the specialty in medicine (4). Then, we used the electronic search database Google Scholar (Google Inc., Mountain View, CA, USA) to analyze whether an abstract was published as a full-text in a scientific journal. After the finding published articles, the article's full title and all author's (starting from the first author) were searched in PubMed (National Library of Medicine, Bethesda, MD, USA), and TUBITAK ULAKBIM (Cahit Arf Information Center, Ankara, Turkey) databases and cross-checked and confirmed that it was the final publication (5-7).

The publication rates of oral presentations by years were calculated, and all published presentations were analyzed in terms of peer-reviewed journal type. Journals in which abstracts were published were grouped according to their indexing in the Master Journal List (Thomson Reuters, NY, USA) and TUBITAK ULAKBIM (Cahit Arf Bilgi Merkezi, Ankara, Turkey) databases. These journals

were divided into three groups as SCI(E) and out of the scope of SCI(E) international peer-reviewed journals and national peer-reviewed journals according to their indexing defined in the master journal list and Turkish medical index.

The time between presentation and publication was also analyzed.

The abstract presented and the last published article were compared to assess any discrepancies such as the title of the study, author names, number, order, and material method. The article was deemed to have been published if it contained at least one common hypothesis, study design, or conclusion and had one co-author (presenter or first author). However, studies with different sample sizes and/or using extra material/methods were not included. We chose the online publication dates of the articles for analyzing the publication time in our study, if not, the publication dates in the relevant journal as data.

## Statistical Analysis

Statistical analysis was performed using IBM SPSS version 21.0 software (IBM Corp., Armonk, NY, USA).

The publication time of oral presentations was given with the median, minimum, and maximum. The numbers and frequencies of oral presentations according to years, institutions, and study design, whether they are thesis studies and whether they are published or not, and the number and frequencies of the published abstracts according to years, institutions, study design, whether they are thesis studies and the journals in which they are indexed, were evaluated with descriptive statistics. Comparison of publication rates and indexing journals were evaluated using the chi-square analysis due to congress year, institutions type, thesis study, and study design. The Chi-square test or Fisher-Freeman-Halton Exact test (when chi-square test assumptions do not hold due to low due to low expected cell counts), where appropriate, was used to compare. The parameters with more than two variables were grouped as two in sequence and turned into tables with four compartments. The statistical difference between these new groups was analyzed with the chi-square test and the parameter that made a significant difference was determined. As the publication time was not normally distributed the Kruskal-Wallis test were conducted to compare this parameter and institutions, congress year, and indexing. The Mann-Whitney U test was performed to test the significance of pairwise differences using Bonferroni correction to adjust for multiple comparisons. A p-value of <0.05 was considered statistically significant with a 95% confidence interval (CI).

## RESULTS

Between 2014 and 2018, 378 studies were presented orally at national pathology congresses. The distribution of the presentations according to these years are 30 (7.9%), 60 (15.9%) 64 (16.9%) 74 (19.6%) and 150 (39.7%), respectively. In the 5-year analysis, the total number of abstracts accepted for presentation at congresses were 879, 1002, 687, 728 and 771, respectively, by years. 3.41% (n=30) of the abstracts in 2014, 5.89% (n=60) in 2015, 9.31% (n=64) in 2016, 10.16% in 2017 ( n=74) and 19.45% (n=150) in 2018 were orally presented. 199 (52.6%) of the presentations were designed prospective and 179 (47.4%) were retrospective studies. Of the retrospective studies, 0.03% (n=6) were survey studies, 0.05% (n=10) case series, and 0.027% (n=5) case reports. In addition, 64 (16.9%) of these abstracts are studies obtained from specialty theses in medicine. Of the institutions where the studies were conducted, 278 (73.5%) were university hospitals, 89 (23.5%) were training and research hospitals, and 11 (3.0%) were other institutions (Table 1).

There was no statistically significant difference in the rate of publication of abstracts among the institutions (p=0.127). There was no statistically significant difference between the publication rate of the abstract and whether it was a thesis study or not (p=0.822). The publication rate of the studies presented at the 2018 national pathology congress was found to be significantly lower than in other years (p=0.001). In addition, the publication rate was found to be significantly higher in the prospective design of the study than in the retrospective (p=0.031) (Table 2).

The average publication time of the oral abstracts presented was 15.0±12.3 (0.1-68.9) months. When the publication times of these abstracts were examined, it was found that there was no significant difference between the institution where the study was conducted, the study design, the congress year in which it was presented, and the journals indexed (p=0.424, p=0.132, p=0.324, and p=0.320 respectively). However, the publication time of the abstracts obtained from thesis studies was significantly longer compared to non-thesis studies (p=0.004) (Table 3).

**Table 1.** Baseline characteristics of orally presented abstracts

The congress year	Presented abstracts n ( % total )	Institution			Study design		Thesis study	Publication rate
		University	Research and training hospital	Other	Prospective	Retrospective		
2014	30 (7.9)	23 (76.7)	7 (23.3)	0 (0)	22 (73.3)	8 (26.7)	3 (10.0)	16 (53.3)
2015	60 (15.9)	39 (65.9)	17 (28.3)	4 (6.7)	33 (55.0)	27 (45.0)	12 (20.0)	20 (33.3)
2016	64 (16.9)	48 (75.0)	15 (23.4)	1 (1.6)	33 (51.6)	31 (48.4)	12 (18.8)	17 (26.6)
2017	74 (19.6)	59 (79.7)	13 (17.6)	2 (2.7)	48 (64.9)	26 (35.1)	16 (21.6)	24 (32.4)
2018	150 (39.7)	109 (72.6)	37 (24.7)	4 (2.7)	63 (42.0)	87 (58.0)	21 (14.0)	25 (16.7)
Total	378 (100)	278 (73.5)	89 (23.5)	11 (3.0)	199 (52.6)	179 (47.4)	64 (16.9)	102 (27.0)

**Table 2.** Publication rates of orally presented abstracts

The congress year	Published n (%)		p value
	Yes	No	
2014	16 (53.3)	14 (46.7)	0.83 <sup>a</sup>
2015	20 (33.3)	40 (66.7)	
2016	17 (26.6)	47 (73.4)	
2017	24 (32.4)	50 (67.6)	
2018	25 (16.7)	125 (83.3)	
<b>Institution</b>			0.127 <sup>b</sup>
University	71 (25.5)	207 (74.5)	
Research and training hospital	30 (33.7)	59 (66.3)	
Other	1 (9.1)	10 (90.9)	
<b>Thesis Study</b>			0.822 <sup>a</sup>
Yes	18 (28.1)	46 (71.9)	
No	84 (26.8)	230 (73.2)	
<b>Study design</b>			0.031 <sup>a*</sup>
Prospective	63 (31.7)	136 (68.3)	
Retrospective	39 (21.8)	78.2)	

<sup>a</sup>p-value's calculated by chi-square analysis, <sup>b</sup>p-value's calculated by Fisher-Freeman-Halton Exact test, <sup>c</sup>Significantly different values

**Table 3.** Publication time of orally presented abstracts

Institution	Publication time (month)	p value
	Median (Min - Max)	
University	13.8 (0.1-68.9)	0.424 <sup>c</sup>
Research and training hospital	11.6 (0.2-58.3)	
Other	26.6 (26.6-26.6)	
<b>Thesis study</b>		0.004 <sup>d*</sup>
Yes	20.3 (8.5-43.5)	
No	11.4 (0.1-68.9)	
<b>Study design</b>		0.132 <sup>d</sup>
Prospective	14.5 (0.1-68.9)	
Retrospective	10.8 (0.2-40.4)	
<b>The congress year</b>		0.324 <sup>c</sup>
2014	15.9 (0.4-68.9)	
2015	10.0 (0.1-58.3)	
2016	15.4 (0.3-40.4)	
2017	14.0 (1.6-36.2)	
2018	10.8 (0.2-26.6)	
<b>Indexing</b>		0.320 <sup>c</sup>
SCI(E)	12.9 (0.2-68.9)	
IPRJ	9.3 (0.1-29.8)	
NJ	16.0 (0.9-58.3)	

<sup>a</sup>p-value's calculated by the Kruskal-Wallis analysis, <sup>b</sup>p-value's calculated by the Mann Whitney U analysis, <sup>c</sup>Significantly different values, SCI(E): Science citation index (expanded), IPRJ: out of the scope of SCI(E) international peer-reviewed journals, NJ: National peer-review journal

When the indexing of the journals in which the abstracts were published was evaluated, it was seen that the congress where the study was presented with the institution did not make a significant difference ( $p=0.314$ ). In addition, it was found that prospectively designed studies were significantly more published in SCI (E) indexed journals than retrospective studies ( $p=0.02$ ) (Table 4).

	Indexing n (%)			p value
	SCI	IPRJ	NJ	
<b>Institution</b>				0.314 <sup>a</sup>
University	45 (63.4)	13 (18.3)	13 (18.3)	
Research and training hospital	18 (60.0)	5 (16.7)	7 (23.3)	
Other	0 (0.0)	1 (100.0)	0 (0.0)	
<b>Thesis study</b>				0.077 <sup>a</sup>
Yes	7 (38.9)	6 (33.3)	5 (27.8)	
No	56 (66.6)	13 (15.5)	15 (17.9)	
<b>Study design</b>				0.02 <sup>a*</sup>
Prospective	44 (69.8)	12 (19.1)	7 (11.1)	
Retrospective	19 (48.8)	7 (17.9)	13 (33.3)	
<b>The congress year</b>				0.275 <sup>a</sup>
2014	13 (81.2)	1 (6.3)	2 (12.5)	
2015	13 (65.0)	4 (20.0)	3 (15.0)	
2016	13 (76.4)	2 (11.8)	2 (11.8)	
2017	13 (54.1)	4 (16.7)	7 (29.2)	
2018	63 (61.8)	19 (18.6)	20 (19.6)	

<sup>a</sup>p-value's calculated by chi-square analysis, <sup>\*</sup>Significantly different values, SCI(E): Science citation index (expanded), IPRJ: out of the scope of SCI(E) international peer-reviewed journals, NJ: National peer-review journal

## DISCUSSION

Our study is the first study of the publication rate of oral presentations presented at the national pathology congresses in Turkey. In national pathology congresses, as in other congresses, abstracts are evaluated in a detailed scoring system. Abstracts that do not meet the criteria for being an oral presentation are either accepted as poster presentations or rejected. It is considered that these papers, which are examined and selected, are highly likely to be published in peer-reviewed journals (8,9).

The rate of oral presentations in the national pathology congress is increasing year by year. While this rate was 3.41% ( $n=30$ ) in 2014, it increased to 19.45% ( $n=150$ ) in 2018. The increase in the scientific quality of the studies is an important factor that increases the rate of acceptance of the submitted abstracts as oral presentations. In the increase of this rate, the obligation to make oral presentations at national and international scientific meetings was brought to the criteria of associate professorship determined by the higher education board, which may have led researchers to prepare better quality studies and make oral presentations.

After two years of follow-up, 27% of the abstracts presented in the national pathology congresses held consecutively between 2014-2018 were published in a peer-reviewed journal. This rate is lower than other international pathology congresses and congresses in other branches. In the study conducted by Song et al., the publication rate of the abstracts presented in USCAP was found to be 36% and it was stated that the average was between 30-50%. In this study, the publication rates of the poster and oral presentations were examined, and the publication rate of oral presentations was found to be higher (1). The low publication rate in our study may be related to the shorter follow-up period. Considering the publication rate by year, the publication rate in 2018 (16.7%) was found to be significantly lower than in other years (Table 2). In 2014, this rate is 53.3%. We think that the lengthening of the follow-up period affects the duration of the publication.

Considering the study designs of the abstracts, 52.6% were prospective and 47.4% were retrospective studies. Case series, case reports, and questionnaire studies were included in the retrospective group.

In our study, 31.7% ( $n=63$ ) of the prospectively designed studies and 21.8% ( $n=39$ ) of the retrospectively designed studies were published. When evaluated according to study design, the publication rate in prospective studies was found to be significantly higher than retrospective studies ( $p=0.031$ ). This can be explained by the higher publication quality of prospective studies. The fact that retrospective studies give repetitive results and that refereed journals generally give priority to articles that give comprehensive and new results may be among the factors that reduce the rate of publication. In addition, the fact that peer-reviewed journals do not receive case reports or they accept very rare and specific cases may be one of the factors that reduce the rate of publication in the retrospective group.

Considering the congress time and publication time, the average period of publication was found to be 15 months. In the study of Aksüt et al, this period was found to be 16.7 months on average, and 18.4 months in the study of Scherer et al. (9,10). The average publication time in our study is shorter than in other studies. Variables such as the differences in the evaluation stages between journals, the time waited by the referees, the difference in the number of issues published annually may affect this period. When the publication times of these abstracts were examined, it was found that there was no significant difference between the institution where the study was conducted, the study design, the congress year in which it was presented, and the journals indexed ( $p=0.424$ ,  $p=0.132$ ,  $p=0.324$ , and  $p=0.320$  respectively). However, the publication time of the abstracts obtained

from thesis studies was significantly longer compared to non-thesis studies (20.6±9.5 months). While trying to adapt in the first years of the specialty, not having enough time to publish the specialty theses, the concerns caused by the inexperience in the first days of the specialization may be among the reasons that suspend the article from writing.

Considering the institutions to which the abstracts were sent in our study, although there was no statistically significant difference between the institutions, the rate of sending abstracts from university hospitals was the highest (73,5%). training and research hospitals follow with a 23.5% publication rate. In the study of Aksüt et al., the publication rate of abstracts sent from university hospitals was found to be significantly higher than other institutions (9). In the study of Oktay et al. evaluating the publication rate of abstracts presented at national cardiology congresses, the rate of publication sent from training and research hospitals was found to be higher. In their study, they associated these hospitals as specialized with experienced staff (11).

The publication rate of oral presentations made in pathology congresses in SCI(E) indexed journals was higher than in other journals. It was reported that the SCI(E) publication rate was 85.7% in Oktay et al.'s study and was 48.5% in Aksüt et al.'s study (11). In our study, this rate was found to be 62%. In addition, 19% of the publications were published in national refereed journals and 19% in other international refereed journals other than SCI(E). Although the publication of the presented study in high impact factor journals shows the high scientific quality of the congresses, it is a matter of debate whether the number of publications in international refereed journals is an indicator of scientific performance (12). To evaluate the quality of publications, factors such as the number of citations and the h index should also be considered (13). We did not evaluate the number of citations of the oral presentations published in our study and the impact factors of the journals.

Our study has some limitations. Google Scholar, PubMed, and TUBITAK ULAKBIM databases were used for scanning. For this reason, may not have been able to access the articles published in different databases. Poster presentations were not included in the study. Due to the limited number of studies on the publication rate of presentations presented in pathology congresses, sufficient comparisons could not be made.

## CONCLUSION

As a result, the publication rate of oral presentations in pathology congresses is close to other congresses. To

reach the same level as international congresses, we think that this ratio will increase by increasing the scientific quality of the studies. We believe that researchers should develop not only oral presentations but also encouraging methods to transform studies into publications. Giving make scientific research training during residency may contribute to increasing this rate.

## ETHICAL DECLARATIONS

**Ethics Committee Approval:** In our study, only open access data were used, therefore, ethics committee approval was not required.

**Referee Evaluation Process:** Externally peer-reviewed.

**Conflict of Interest Statement:** The authors have no conflicts of interest to declare.

**Financial Disclosure:** The authors declared that this study has received no financial support.

**Author Contributions:** All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

**Note:** This study orally presented at 6<sup>th</sup> International Medical and Health Sciences Research Congress, April 10-11, 2021, Ankara, Turkey

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