

Top 100 Highest Cited Articles on Thyroid Surgery (Since 2010): A Bibliometric Analysis

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ABSTRACT

Objective: The total number of citations of a research article can be used to determine its impact on the scientific arena. We aimed to identify the top 100 articles published on thyroid surgery and evaluate their characteristics.

Methods: The authors searched the Thomson Reuters Web of Knowledge for citations of articles on thyroid surgery published from 2010 to 2021. The number of citations, authorship, year, journal, and country and institution of publication were recorded for each article.

Results: Among the top 100 articles, there were 86 original articles, 12 review articles, and 6 proceeding papers. Top 100 articles received a total of 5285 citations (an average of 52.8 citations per journal) from 3469 different journals, and the most cited article received 218 citations. The leading institutions were Harvard University (12%), University of Insubria (9%), and Johns Hopkins University (7%). The top 100 articles were published in 25 different journals, with “Surgery” having the highest numbers (n=14), followed by “World Journal of Surgery” (n=10). The 100 most cited articles are most frequently based in the USA (41%), Italy (17%), and Germany (13%).

Conclusion: The present study has produced a detailed list of the most cited articles on thyroid surgery. This list makes it possible to recognize classic articles on thyroid surgery, as well as research trends and academic achievements in this field.

INTRODUCTION

Thyroid surgery covers a multitude of treatments such as thyroid cancer, multinodular goiter, and Graves’ disease. With the increasing incidence of thyroid cancer in recent years, thyroid surgery has become more important.^[1] As a result, many articles on thyroid surgery have been published in journals of surgery, medicine, basic science, radiology, and nuclear medicine. However, many clinicians are not completely aware of the nature of these studies because the literature is vast and complex. Bibliometric studies are essential because they reveal research trends over a period of time and guide researchers on areas they can explore.^[2] In addition, clinicians’ decisions are often based on high-impact studies, so they can present evidence-based models for making decisions about controversial bibliometric research issues.^[3]

There are bibliometric analysis studies in the literature in areas such as colorectal surgery, hepatobiliary surgery, and breast surgery.^[4-7] There are also bibliometric analyses of thyroid cancer, but a contemporary bibliometric analysis of thyroid surgery is lacking in the literature.^[8] This study sought to identify and analyze the 100 most cited studies on thyroid surgery published since 2010.

MATERIALS AND METHODS

Data source and search strategy

The authors searched the Clarivate Analytics Web of Science Core Collection database for citations of articles on thyroid surgery published from 2010 to 2021.^[9] The search was limited to full-length articles published in English. We evaluated the first 100 articles with the most citations in the field of thyroid surgery.

Main outcomes and measures

After identifying the relevant articles, the number of citations, authorship, year, journal, country, and institution of publication were recorded for each article.

Statistical analysis

The bibliographic information of the selected publications was automatically converted and analyzed. No statistical methods were used in the study. All data were reported as percentages, numbers, and graphs.

Ethical approval

As this study used publicly available data obtained from

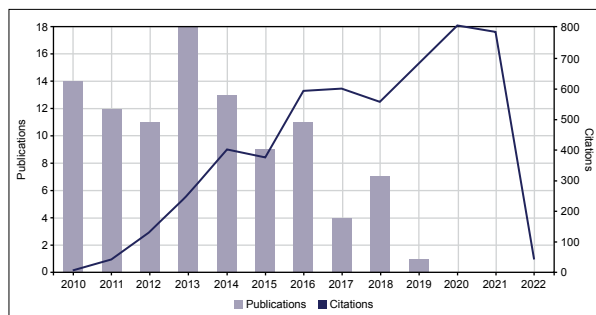


Figure 1. Number of publications and the number of times cited over time.

open access sources, ethical approval was not deemed necessary. No attempts were made to contact authors or institutions to obtain further information. The study was conducted according to the Declaration of Helsinki.

RESULTS

In this study, we have listed 100 full-length articles in English. Our findings showed that these 100 articles received a total of 5285 citations from 3469 different journals (an average of 52.8 citations per journal), and the most cited article received 218 citations. The number of most cited articles over the last 10 years peaked at 18 articles in 2013. The number of publications and the number of times cited over time are shown in Figure 1. Among the top 100 articles, 86 were original articles, 12 review articles, and 6 proceeding papers (Table 1).

The leading institutions were Harvard University (12%), University of Insubria (9%), and Johns Hopkins University (7%) (Table 2).

The first 100 articles were published in 25 different journals. Surgery (n=14) ranked top with the highest number, which is followed by the World Journal of Surgery (n=10) (Table 3). "Springer" was the top publisher with 32 publications, followed by "Elsevier" with 26 publications.

The 100 most cited articles are most frequently based in the USA (41%), Italy (17%), and Germany (13%). In addition, among the most cited articles, 3 publications are based in Turkey and have received 145 citations in total. The author with the most publications was Dionigi G. with 9 publications followed by Dralle H. with 7 publications (Table 4). Among the 100 most cited articles, 31 were

Table 1. Document types

Document type	Record count	Percentage
Original	87	87.000
Review	11	11.000
Proceeding	6	6.000
Editorial	2	2.000
Retracted	1	1.000

open access and 12 were free to read. Ninety-four articles were published in Science Citation Index Expanded (SCI-E) indexed journals.

Table 2. Institutions of origin

Institution	Record count	Percentage
Harvard University	12	12.000
University of Insubria	9	9.000
Johns Hopkins University	7	7.000
Martin Luther University	7	7.000
Halle Wittenberg		
Massachusetts Eye Ear Infirmary	7	7.000
Kaohsiung Medical University	6	6.000
Tulane University	6	6.000
Kaohsiung Medical University Hospital	5	5.000
Massachusetts General Hospital	5	5.000
University of Cagliari	5	5.000

Table 3. Publications title

Publication title	Record count	Percentage
Surgery	14	14.000
World Journal of Surgery	10	10.000
Annals of Surgical Oncology	9	9.000
British Journal of Surgery	8	8.000
Head and Neck Journal for the Sciences and Specialties of the Head and Neck	6	6.000
JAMA Otolaryngology	5	5.000
Head Neck Surgery		
International Journal of Surgery	4	4.000
Langenbeck's Archives of Surgery	4	4.000
Otolaryngology Head and Neck Surgery	4	4.000
American Journal of Surgery	3	3.000

Table 4. Top 10 authors with most publications

Author	Record count
Dionigi G	9
Dralle H	7
Chiang FY	6
Lorenz K	6
Randolph GW	6
Tufano RP	6
Wu CW	6
Calo PG	5
Kandil E	5
Nicolosi A	5

DISCUSSION

Bibliometric analysis can help researchers easily access and analyze a variety of studies that provide a historical perspective on medical progress. Bibliometrics makes it possible to assess not only the quantity but also the quality of publications related to a particular field and topic.^[10] Our analysis provides insights into the development of thyroid surgery over the last decade and identifies the articles and topics that have had the greatest impact.

In recent years, in parallel with the technological developments in the field of surgery, significant progress has been made in thyroid surgery. In examining the 100 most cited articles, it was observed that over the last 10 years, most of the research was written in 2013, with the peak citation frequency occurring in 2020 and 2021. However, it should be noted that the number of citations is closely related to the date of publication of the article. This result may indicate that the development and progress in the field of thyroid surgery have occurred in a short time.

One of the highlights of our analysis is that all articles were published in journals having a high impact factor. The quality of the journals in which the articles are published reflects the importance of these studies in scientific and clinical communities. It is important to note that the first 100 most cited articles were published in well-known medical journals, such as *Surgery*, *World Journal of Surgery*, *Annals of Surgical Oncology*, and *British Journal of Surgery*, rather than in local journals on a particular topic. The most popular articles were most often written by researchers from the USA, Italy, and Germany. It has been observed that original and review articles on topics such as voice changes and recurrent nerve injury after thyroid surgery, robotic and transoral thyroid surgery, and treatments for papillary thyroid cancer have attracted much attention and have been widely cited. Only 3 articles from Turkey were included in the top 100.^[11–13] We believe that Turkish surgeons with extensive experience in the practice of thyroid surgery can do more effective studies with original articles on current issues.

The article by Chandrasekhar et al.^[14] “Clinical practice guidelines: Improving voice outcomes after thyroid surgery” was the most cited article in the last 10 years, with 217 citations. The article was published in the journal *Otolaryngology–Head and Neck Surgery* in 2013 with an impact factor of 6.2. The most cited authors are leaders in their field. Dionigi G ranks first in the list of authors with the highest number of articles (11 articles), and all of his articles are about “intraoperative nerve monitoring” and its results. This result shows that recurrent nerve injury, which is one of the most dangerous complications of thyroid surgery, is still on the agenda and will also guide surgeons who plan to perform citations.^[15]

However, our research has some limitations. First, there were differences in publication time. Valuable studies published recently may appear in the future with high citations in similar bibliometric studies, as older articles have the

ability to be cited more. Second, some publications are tagged with multiple publication types. Although the publication type is set manually by double-checking, it may still cause an inaccuracy. In addition, only articles on thyroid surgery have been reviewed; frequently cited studies on specific topics can be considered separately. In our study, analyses and searches were conducted under one heading to ensure homogenization. Finally, the Web of Science database does not fully contain all available literature or indexes, and therefore it may not provide a representative number of citations.

CONCLUSION

Consequently, the total number of citations of a research article can be used to determine its impact on the scientific arena. We sought to evaluate the characteristics of the first 100 articles published on thyroid surgery. This study has produced a detailed list of the most cited articles on thyroid surgery. This list highlights research trends and scientific advances in the field, as well as classic articles on thyroid surgery.

Informed Consent

Retrospective study.

Peer-review

Internally peer-reviewed.

Authorship Contributions

Concept: Y.T., O.A.; Design: G.A., Ö.F.İ.; Supervision: Y.T., O.A.; Data: Ö.F.İ., Y.T.; Analysis: G.A., Y.T.; Literature search: Y.T., O.A.; Writing: Y.T., G.A.; Critical revision: Y.T., O.A., Ö.F.İ., G.A.

Conflict of Interest

None declared.

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Tiroid Cerrahisi Üzerine En Çok Atıf Alan İlk 100 Makalenin (2010'DAN BERİ): Bibliometrik Analizi

Amaç: Bir araştırma makalesinin toplam atıf sayısı, bilimsel arenadaki etkisini belirlemek için kullanılabilir. Tiroid cerrahisi ile ilgili yayınlanmış ilk 100 makaleyi belirleyerek özelliklerini değerlendirmeyi amaçladık.

Gereç ve Yöntem: Yazarlar, tiroid cerrahisi ile ilgili olarak 2010'dan 2021'e kadar yayınlanan tüm makalelerin alıntılarını Thomson Reuters Web of Knowledge'da aradılar. Her makale için atıf sayısı, yazarlık, yıl, dergi, yayınlandığı ülke ve kurum kaydedildi.

Bulgular: İlk 100 makale arasında 86 orijinal makale, 12 inceleme ve 6 bildiri vardı. İlk 100 makale 3469 farklı dergi tarafından toplam 5285 atıf aldı (dergi başına ortalama 52,8 atıf), ve en çok atıf alan makale 218 atıf aldı. Önde gelen kurumlar Harvard Üniversitesi (%12), Insubria Üniversitesi (%9), John Hopkins Üniversitesi (%7) idi. İlk 100 makale 25 farklı dergide yayınlanmış olup, en yüksek sayıyı "Surgery" (n=14) alırken, onu "World Journal of Surgery" (n=10) takip etmektedir. En çok alıntı yapılan 100 makale en sık ABD (%41), İtalya (%17) ve Almanya'da (%13) bulunmaktadır.

Sonuç: Bu çalışma, tiroid cerrahisi hakkında en çok alıntı yapılan makalelerin ayrıntılı bir listesini üretmiştir. Bu liste, tiroid cerrahisi ile ilgili klasik makalelerin yanı sıra bu alandaki araştırma eğilimlerini ve akademik başarıları tanımayı mümkün kılar.

Anahtar Sözcükler: bibliyometrik analiz; en çok atıf alan makaleler; tiroid cerrahisi.