

A Scientometric Analysis of Neuroendocrine Tumor Research: Trends and Impact in Three Specialized Journals

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Abstract

This scientometric study examines the growth dynamics, publication trends, and editorial features of three prominent journals in the field of neuroendocrinology during a 25-year span (2000-2024): Journal of Neuroendocrinology, Neuroendocrinology, and Neuroendocrinology Letters. These journals published 11,836 papers in total, with research production steadily rising and reaching its highest point in 2018. Although the Journal of Neuroendocrinology had the most steady and constant growth, with the highest average Relative Growth Rate (RGR=0.0354) and Compound Annual Growth Rate (CAGR=3.75%), Neuroendocrinology accounted for the most number of articles (40.8%). Block-wise analysis showed that journal dominance changed with time, with the most recent era (2000-2024) seeing the Journal of Neuroendocrinology overtake Neuroendocrinology Letters, which was in the lead in the early 2000s. Particularly in Neuroendocrinology, authorship and document type trends reflect changing editorial norms and a rise in collaborative research. Further demonstrating the worldwide distribution of research is the preponderance of English-language publications. Overall, this study shows that the Journal of Neuroendocrinology is the most prominent and rapidly expanding platform in the field, while Neuroendocrinology Letters' production has been steadily declining.

Keywords: Scientometric analysis, Neuroendocrinology Letters, Journal of Neuroendocrinology, Neuroendocrinology, ARG, ARoG, Dt, RGR

1. Introduction

Neuroendocrine tumors (NETs) are a broad category of cancers that arise from neuroendocrine cells found all over the body. The lungs, pancreas, and digestive system are where these cells are most frequently found. These tumors are characterized by their ability to release peptides and neuroamines, which can lead to a variety of clinical presentations, ranging from hormone driven syndromes like carcinoid syndrome to silent disease.

Reports of Nets have significantly grown during the last few decades. Improvements in diagnostic imaging methods, greater physician awareness, and the wider use of endoscopic examinations are thought to be the main drivers of this trend. The age-adjusted incidence of NETs in the United States, for example, increased from little more than 1 case per 100,000 people in 1973 to about 7 instances per 100,000 by 2012, according to data from the surveillance, Epidemiology, and End Results (SEER) database. NETs are particularly

significant from a clinical perspective due to their chronic nature and hormone producing capability, even though they are still less common than many other tumors.

The site of origin, degree of cellular differentiation, and tumor grade are the main criteria used to categorize NETs. In order to guide prognosis and treatment decisions, the World Health Organization (WHO) uses criteria like mitotic rate and the Ki-67 proliferation index to distinguish between well-differentiated NETs and poorly differentiated neuroendocrine carcinomas (NECs). The clinical progression of these tumors differs greatly; high-grade NECs are frequently more aggressive and have a worse prognosis, while well-differentiated NETs usually advance slowly.

Because of their relative rarity and frequently vague presentation, NETs can be especially difficult to diagnose and treat. For precise identification and staging, contemporary imaging techniques such as somatostatin receptor scintigraphy (SRS) and ⁶⁸Ga-DOTATATE PET/CT are essential.

Accurate diagnosis is also aided by biochemical indicators such as chromogranin A and histological analysis. Surgery, Somatostatin analog therapy, targeted medicines such as everolimus and sunitinib peptide receptor radionuclide therapy (PRRT), and systematic chemotherapy are among possible treatment options, depending on the tumor type, location, grade, and severity of the disease.

Many important facets of NET biology and treatment are still poorly understood, despite significant advancements in diagnosis and treatment. This covers the fundamental molecular causes of tumor growth, variables impacting the effectiveness of treatment, and the best practices for treating advanced or resistant cancer. Therefore, continued research is necessary to increase the precision of diagnosis, expand our knowledge of tumor biology and create more specialized treatment strategies.

2. Review of Literature

Köseoğlu *et al.* (2024) conducted a bibliometric analysis using the Web of Science Core Collection to examine global publishing patterns and research hotspots pertaining to gastric neuroendocrine neoplasm (gNENs) from 1980 to 2022. As Scholarly interest in this uncommon disease group grew, their analysis revealed a notable increase in publication volume and citation frequency over time, particularly after 2010. According to the analysis, the Norwegian University of Science Technology was the most prolific institutions, and the United States, Japan, and Italy were the top contributors. The most prolific and frequently cited author was Modlin IM. The topic’s interdisciplinary relevance is demonstrated by the fact that the majority of research was published in Q1 and Q2 journals in the domains of gastroenterology, endocrinology, and oncology. Strong relationships between a nation’s research production and economic measures like GDP, GDP per capita, and HDI were also discovered by the study. This work provides important insights into the past and present state of scientific activity and acts as a strategic roadmap for future research paths in the field as the first bibliometric evaluation of gNENs.

Wang *et al.* (2024) examined the development of theranostic approached in neuroendocrine tumors (NETs) emphasizing a notable shift from agonists to antagonists of somatostatin receptor (SSTR). Because of their capacity to internalize into tumor cells, radiolabeled SSTR agonists such as [⁶⁸Ga]Ga-DOTATOC and [¹⁷⁷Lu]Lu-DOTATATE have historically been utilized extensively for imaging and peptide receptor radionuclide treatment (PRRT). Despite not internalizing, new research has demonstrated that SSTR antagonists, including [⁶⁸Ga]Ga-DOTA-JR11, provide superior tumor-to-background contrast and higher tumor uptake because they bind to receptor conformations more broadly. This change points to better therapeutic and diagnostic results, suggesting a prospective avenue for further study and clinical implementation in the treatment of NETs.

Tanaka and Del Giglio (2022) assessed worldwide research trends in pulmonary neuroendocrine tumors (NETp) for the previous 20 years using a thorough scientometric study. They

found that research production has significantly increased, primarily from economically developed countries like Italy, the United States, and Japan, after looking at 2016 articles from 35 different countries. The study emphasized the importance of histological diagnosis and found that, in treatment-related research, retrospective studies significantly outnumber prospective ones. This emphasis implies that although diagnostic knowledge of NETp has improves, prospective therapeutic research is still desperately needed to improve treatment approaches. The authors came to the conclusion that NETp research is still in its infancy and that further forward-looking clinical studies are required to enhance patient outcomes.

3. Objectives of the Study

The main objective of this study is to analyze the neuroendocrine tumor research output during 2000-2024. The study has the following objectives:

- To analyze the year-wise publication trends in the top three journals contributing the most of neuroendocrine tumor research.
- To examine the distribution of articles from the top three journals across predefined block periods.
- To calculate and interpret the Relative Growth Rate (RGR) and Doubling Time (Dt) of Neuroendocrine tumor research publications over the last 25 years.
- To evaluate the annual growth rate and Annual ratio of publications in neuroendocrine tumor research.
- To compute the Compound annual Growth Rate (CAGR) of neuroendocrine tumor research
- To conduct a document type analysis of neuroendocrine tumor research.
- To perform a language wise analysis of neuroendocrine tumor research.
- To analyze the authorship patterns in neuroendocrine tumor research

4. Methodology

Bibliographic information for this study was obtained and downloaded from the Web of Science core collection database over a 25 year (2000-2024) period using the ISSN number of all the three journals of neuroendocrine tumor. A total of 11836 publications covering different facets of neuroendocrine tumor research were found during the search. Microsoft Excel, which enabled quantitative evaluations such publication trends, growth indicators, authorship patterns, and document type distributions, was used to clean, arrange, and analyze the gathered data.

5. Analysis and Interpretation

1. Year-wise Publications of top 3 Journals of neuroendocrine tumor

The table shows the year-wise publication output of the top three journals contributing to neuroendocrine tumor research from 2000 to 2024.

Table 1: Year-wise publications of top 3 journals of neuroendocrine tumor

Total Productivity			Journal of Neuroendocrinology		Neuroendocrinology		Neuroendocrinology Letters	
S. No	Year	Total	Records	%	Records	%	Records	%
1.	2000	316	158	3.96	90	1.86	68	2.26
2.	2001	289	128	3.21	90	1.86	71	2.36
3.	2002	327	121	3.03	83	1.72	123	4.08
4.	2003	362	152	3.81	87	1.80	123	4.08

5.	2004	298	128	3.21	75	1.55	95	3.15
6.	2005	326	99	2.48	78	1.61	149	4.95
7.	2006	470	103	2.58	171	3.54	196	6.51
8.	2007	379	111	2.78	56	1.16	212	7.04
9.	2008	428	176	4.41	60	1.24	192	6.37
10.	2009	498	132	3.31	196	4.05	170	5.64
11.	2010	525	143	3.58	220	4.55	162	5.38
12.	2011	532	137	3.43	222	4.59	173	5.74
13.	2012	594	150	3.76	259	5.36	185	6.14
14.	2013	348	128	3.21	72	1.49	148	4.91
15.	2014	524	87	2.18	280	5.79	157	5.21
16.	2015	502	86	2.16	269	5.56	147	4.88
17.	2016	618	101	2.53	392	8.11	125	4.15
18.	2017	581	79	1.98	410	8.48	92	3.05
19.	2018	650	107	2.68	466	9.64	77	2.56
20.	2019	531	124	3.11	344	7.12	63	2.09
21.	2020	578	104	2.61	423	8.75	51	1.69
22.	2021	586	330	8.27	191	3.95	65	2.16
23.	2022	499	356	8.92	93	1.92	50	1.66
24.	2023	529	373	9.35	93	1.92	63	2.09
25.	2024	546	376	9.43	114	2.36	56	1.86
	Total	11836	3989	100	4834	100	3013	100

Table 1 presents the annual publication output of the top three journals-Journal of Neuroendocrinology, Neuroendocrinology, and Neuroendocrinology Letters from 2000 – 2024. 11,836 articles were published in these journals throughout this 25 year span. Research activity has been steadily increasing, as seen by the cumulative publication count, which rose from 316 articles in 2000 to 546 in 2024. Interestingly, with 650 articles, 2018 had the most publications, while 2001 had the fewest with 289 records. Neuroendocrinology made the most contribution of any

journal with 4,834 publications (40.8%) followed by Neuroendocrinology letters with 3,013 articles (25.5%) and journal of Neuroendocrinology with 3,989 articles (33.7%).

2. Distribution of all 3 Journal of Neuroendocrine Tumor in Block Wise

The table presents a block-wise distribution of research publications from 2000 to 2024 highlighting the contribution of three major journals.

Table 2: Distribution of all 3 Journal of Neuroendocrine tumor in Block wise

Block Years Total Records		Journal of Neuroendocrinology		Neuroendocrinology		Neuroendocrinology Letters	
		Records	%	Records	%	Records	%
2000-2004	1592	687	17.22	425	8.79	480	15.93
2005-2009	2101	621	15.57	561	11.61	919	30.50
2010-2014	2523	645	16.17	1053	21.78	825	27.38
2015-2019	2882	497	12.46	1881	38.91	504	16.72
2020-2024	2738	1539	38.58	914	18.91	285	9.46
Total	11836	3989	100	4834	100	3013	100
Average Publications Per Block	2367.2	3989/5= 797.8		4834/5= 966.8		3012/5= 602.6	

Table 2 shows block-wise study from 2000 to 2024 reveals changing patterns in Neuroendocrinology journal publications. While Neuroendocrinology soared between 2010 and 2019, journal of Neuroendocrinology Letters dominated early on. Journal of Neuroendocrinology led the most recent block (2020–2024) with 38.58% of records, while the rest fell behind. These changes can be a result of changing journal influence and author preferences.

Each block had about 2,367 publications on average, with Neuroendocrinology making the largest overall contribution.

3. Description of Relative Growth Rate (RGR) and Doubling time (Dt) of Neuroendocrine Tumor Research Over Last 25 Years

The table 3 provides annual values of Relative Growth Rate (RGR) and Doubling Time (DT) from 2000 to 2024 for three leading journals, offering insights into their publication growth dynamics and trends in research output over the years.

Table 3: Description of Relative Growth Rate (RGR) and Doubling time (Dt) of Neuroendocrine Tumor research over last 25 years

Years	Journal of Neuroendocrinology		Neuroendocrinology		Neuroendocrinology Letters	
	RGR	DT	RGR	DT	RGR	DT
2000	-	-	-	-	-	-
2001	-0.21	-3.29	0.00	∞	0.04	16.05
2002	-0.06	-12.32	-0.08	-8.56	0.55	1.26
2003	0.23	3.04	0.05	14.72	0.00	∞
2004	-0.17	-4.03	-0.15	-4.67	-0.26	-2.68
2005	-0.26	-2.70	0.04	17.67	0.45	1.54
2006	0.04	17.50	0.78	0.88	0.27	2.53
2007	0.07	9.26	-1.12	-0.62	0.08	8.83

2008	0.46	1.50	0.07	10.04	-0.10	-6.99
2009	-0.29	-2.41	1.18	0.59	-0.12	-5.69
2010	0.08	8.66	0.12	6.00	-0.05	-14.38
2011	-0.04	-16.17	0.01	76.58	0.07	10.55
2012	0.09	7.64	0.15	4.50	0.07	10.33
2013	-0.16	-4.37	-1.28	-0.54	-0.22	-3.11
2014	-0.39	-1.79	1.36	0.51	0.06	11.74
2015	-0.01	-59.94	-0.04	-17.29	-0.07	-10.53
2016	0.16	4.31	0.38	1.84	-0.16	-4.27
2017	-0.25	-2.82	0.04	15.44	-0.31	-2.26
2018	0.30	2.28	0.13	5.41	-0.18	-3.89
2019	0.15	4.70	-0.30	-2.28	-0.20	-3.45
2020	-0.18	-3.94	0.21	3.35	-0.21	-3.28
2021	1.15	0.60	-0.80	-0.87	0.24	2.86
2022	0.08	9.14	-0.72	-0.96	-0.26	-2.64
2023	0.05	14.86	0.00	∞	0.23	3.00
2024	0.01	86.51	0.20	3.40	-0.12	-5.88
Mean	0.0354	2.34	0.010	0.14	-0.01	-0.74

Table 3 presents different growth trajectories among the journals are highlighted by RGR and DT analysis (2000-2024). With a ST of 2.34 and the highest average RGR (0.0354), the journal of Neuroendocrinology demonstrated steady growth. Neuroendocrinology Letters displayed a minor drop (RGR = -0.01), whereas Neuroendocrinology has a lower RGR (0.010) and erratic growth. While the other two journals saw periods of decrease and volatility, the journal of

Neuroendocrinology had a significant jump in 2021, indicating its growing dominance.

4. Status of Annual Growth Rate and Annual Ratio of Growth of Neuroendocrine Tumors Over 25 Years

Table 4 illustrates the Annual Growth Rate (AGR) and Average Rate of Growth (ARoG) from 2000 to 2024 and highlighting year-wise fluctuations and overall growth patterns in their research publication outputs.

Table 4: Status of annual growth rate and annual ratio of growth of neuroendocrine tumors over 25 years

Years	Journal of Neuroendocrinology		Neuroendocrinology		Neuroendocrinology Letters	
	AGR	ARoG	AGR	ARoG	AGR	ARoG
2000	-	-	-	-	-	-
2001	-18.99%	-18.99	0.00	0.00	4.41	4.41
2002	-5.47%	-12.23	-7.78	-3.89	73.24	38.82
2003	25.62%	0.39	4.82	-0.99	0.00	25.88
2004	-15.79%	-3.15	-13.79	-4.69	-22.76	13.22
2005	-22.66%	-7.46	4.00	-2.55	56.84	22.75
2006	4.04%	-5.70	119.23	17.08	31.54	24.88
2007	7.77%	-3.21	-67.25	5.03	8.16	21.79
2008	58.56%	4.01	7.14	5.05	-9.43	17.13
2009	-25.00%	1.46	226.67	30.34	-11.46	13.40
2010	8.33%	2.84	12.24	28.03	-4.71	11.32
2011	-4.20%	2.33	0.91	25.53	6.79	10.12
2012	9.49%	2.91	16.67	24.48	6.94	9.60
2013	-14.67%	2.10	-72.20	16.76	-20.00	7.12
2014	-32.03%	-0.03	288.29	30.63	6.08	6.56
2015	-1.15%	-0.96	-3.93	28.51	-6.37	5.52
2016	17.44%	-0.23	45.72	29.99	-14.97	3.71
2017	-21.78%	-1.56	4.59	28.43	-26.40	1.03
2018	35.44%	0.89	13.66	27.51	-16.30	-0.83
2019	15.89%	2.26	-26.18	25.29	-18.18	-2.48
2020	-16.13%	1.58	22.97	25.10	-19.05	-4.10
2021	217.31%	10.01	-54.84	22.88	27.45	-2.93
2022	7.88%	10.66	-51.31	20.46	-23.08	-3.94
2023	4.78%	10.70	0.00	19.35	26.00	-2.92
2024	0.80%	9.60	22.58	18.67	-11.11	-2.85
Mean	10.97%	2.57%	20.49%	23.76%	6.03%	11.32%

Table 4 presents growth rates vary, according to the AGR and ARoG study (2000–2024). The journal of Neuroendocrinology showed more consistent growth (AGR 10.97%) reaching its peak in 2021, whereas Neuroendocrinology had the greatest mean AGR (20.49%), but with notable oscillations. Neuroendocrinology Letters had the lowest mean AGR (6.03%) and exhibited early growth

before declining after 2014. While the others exhibit volatility or decline, Journal of Neuroendocrinology seems to be a steady rising trajectory overall.

5. Compound Annual Growth Rate (CAGR) of neuroendocrine Tumor Research

Table 5 presents the Compound Annual Growth Rate (CAGR) for the three journals over the study period.

Table 5: Compound Annual Growth Rate (CAGR) of neuroendocrine tumor research

CAGR	Journal of Neuroendocrinology	Neuroendocrinology	Neuroendocrinology Letters
	3.75%	0.97%	-0.79%

Table 5 shows that the three Neuroendocrinology publications changing tendencies are further supported by the Compound Annual Growth Rate (CAGR) from 2000 to 2024. With the greatest CAGR of 3.75%, the journal of Neuroendocrinology stands out as having consistent and long-term development in its publication output. Despite periods of notable volatility, Neuroendocrinology exhibits a moderate CAGR of 0.97%, indicating minimal overall growth. On the other hand, Neuroendocrinology Letters negative compound annual growth rate (CAGR) of -0.79% indicates a sustained drop in productivity over the course of 25 years. These numbers

support the general pattern shown in other metrics, showing that the journal of Neuroendocrinology is the field’s most rapidly expanding journal, whilst Neuroendocrinology letters seems to be gradually declining.

6. Document Type Analysis of Neuroendocrine Tumor Research

Table 6 categorizes the types of documents published by the three journals showing that research articles dominate the publication.

Table 6: Document type analysis of neuroendocrine tumor research

Document Type	Journal of Neuroendocrinology	Neuroendocrinology	Neuroendocrinology Letters	Total
Article	3283(82.30)	3425(70.85)	2750(91.27)	9458(79.91)
Meeting Abstract	938(23.51)	2868(59.33)	0	3806(32.16)
Review	550(13.79)	91(1.88)	277(9.19)	918(7.76)
Proceedings	154(3.86)	129(2.67)	119(3.95)	402(3.40)
Editorial Material	97(2.43)	44(0.91)	99(3.29)	240(2.03)
Early access	84(2.11)	39(0.81)	1(0.03)	124(1.05)
Note	41(1.03)	17(0.35)	0	58(0.49)
Correction	35(0.88)	40(0.83)	12(0.40)	87(0.74)
Letter	4(0.10)	12(0.25)	38(1.26)	54(0.46)
Biographical Item	3(0.08)	9(0.19)	19(0.63)	31(0.26)
Reprint	0	0	3(0.10)	3(0.03)

Table 6 shows that the examination of document types reveals different editorial approaches used by the journals. Neuroendocrinology prioritizes meeting abstracts (59.33%) for conference content, whereas Neuroendocrinology Letters places a greater emphasis on editorials and original research records (91.27%). With a significant percentage of reviews

(13.79%) and the bulk of articles (82.30%), journal of Neuroendocrinology takes a balanced approach. Overall, research and event driven contributions are represented in the field’s dominance of articles (79.91%) and meeting abstracts (32.16%).

7. Language Wise Analysis in Neuroendocrine Tumor Research

Table 7: Shows the language distribution of publications across the three Journals

Language	Journal of Neuroendocrinology	Neuroendocrinology	Neuroendocrinology Letters
English	5189	6674	3316
German	0	0	2

Table 7 presents the three publications linguistic distribution makes it abundantly evident that English is the most widely used language for academic communication in Neuroendocrinology. The nearly entirely English language publications of the Journal of Neuroendocrinology (5189), Neuroendocrinology (6674), and Neuroendocrinology Letters

(3316) highlight their accessibility and worldwide scholarly reach.

8. Authorship Pattern of Neuroendocrine Tumor Research

Table 8 outlines the authorship pattern in the three journals, revealing a clear trend towards collaborative research.

Table 8: Authorship pattern of Neuroendocrine Tumor research

Authorship Pattern	Journal of Neuroendocrinology	%	Neuroendocrinology	%	Neuroendocrinology Letters	%
One Author	347	8.70	257	5.32	276	9.16
Two Authors	649	16.27	620	12.83	338	11.22
Three Authors	829	20.8	813	16.82	419	13.91
Four Authors	795	19.93	875	18.10	483	16.03
Five Authors	642	16.06	813	16.82	503	16.69
Six Authors	529	13.26	731	15.12	433	14.37
Seven Authors	371	9.30	544	11.25	321	10.65
Eight Authors	261	6.54	448	9.27	188	6.24
Nine Authors	209	5.24	337	6.97	135	4.48
Ten Authors	134	3.36	395	8.17	98	3.25
<Ten Authors	423	10.60	841	17.40	124	4.12
Total	3989	100	4834	100	3013	100

Table 8 shows that there is a clear trend toward collaboration among the journals, according to the authorship analysis. With 25.57% of articles having ten or more authors, Neuroendocrinology leads the field, indicating huge, multi-institutional collaborations. Journal of Neuroendocrinology has a balanced distribution, with the majority of papers (73.06%) authored by two to five researchers, whereas Neuroendocrinology Letters has a higher percentage of single author (9.16%) and two author (11.22%) papers, suggesting a preference for smaller teams.

Conclusion

Comparative scientometric analysis of the three Neuroendocrinology journals between 2000 and 2024 shows significant changes in growth rates, editorial approaches, and publication trends. Although it started off as the most productive field, neuroendocrinology's growth has been erratic, and its impact seems to have plateaued. The publication of Neuroendocrinology, on the other hand, has proven to be the most active and growing publication in the field by exhibiting consistent, long-term growth across a number of criteria, including AGR, RGR, and CAGR. Despite being busy at first, Neuroendocrinology Letters has clearly declined, especially after 2014. The changing character of academic publishing is further highlighted by variations in document types and authorship patterns, with the Journal of Neuroendocrinology choosing a balanced content strategy and growing collaboration.

References

1. Dasari A, Shen C, Halperin D, Zhao B, Zhou S, Xu Y *et al.* Trends in the incidence, prevalence, and survival outcomes in patients with neuroendocrine tumors in the United States. *JAMA oncology*. 2017; 3(10):1335-1342.
2. Hope TA, Bergsland EK, Bozkurt MF, Graham M, Heaney AP, Herrmann K *et al.* Appropriate use criteria for somatostatin receptor PET imaging in neuroendocrine tumors. *Journal of Nuclear Medicine*. 2018; 59(1):66-74.
3. Köseoğlu H, Kaya M, Durak İ, Düzenli T, Kaymazlı M, Sezikli M. Global Publication Trends and Research Hotspots of the Gastric Neuroendocrine Neoplasms: A Bibliometric Analysis of the Current Situation. *European Journal of Therapeutics*. 2024; 30(2):151-159.
4. Modlin IM, Oberg K, Chung DC, Jensen RT, De Herder WW, Thakker RV *et al.* Gastroenteropancreatic neuroendocrine tumours. *The lancet oncology*. 2008; 9(1):61-72.
5. Öberg K. Neuroendocrine tumors of the gastrointestinal tract: recent advances in molecular genetics, diagnosis, and treatment. *Current Opinion in Oncology*. 2005; 17(4):386-391.
6. Pavel M, Öberg K, Falconi M, Krenning EP, Sundin A, Perren A. ESMO Guidelines Committee. Gastroenteropancreatic neuroendocrine neoplasms: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Annals of Oncology*. 2020; 31(7):844-860.
7. Sorbye H, Strosberg J, Baudin E. *et al.* Predictive and prognostic factors for treatment and survival in neuroendocrine neoplasms. *Annals of Oncology*. 2014; 25(6):1039-1047.
8. Strosberg J, El-Haddad G, Wolin E, Hendifar A, Yao J, Chasen B. *et al.* Phase 3 trial of ¹⁷⁷Lu-Dotatate for midgut neuroendocrine tumors. *New England Journal of Medicine*. 2017; 376(2):125-135.
9. Tanaka H, Del Giglio A. International trends in pulmonary neuroendocrine cancer studies: a scientometric study. *einstein (São Paulo)*, 20, eRW0113, 2022.
10. Treglia G, Castaldi P, Rindi G, Giordano A, Rufini V. Diagnostic performance of Gallium-68 somatostatin receptor PET and PET/CT in patients with thoracic and gastroenteropancreatic neuroendocrine tumours: a meta-analysis. *Endocrine*. 2012; 42:80-87.
11. Wang Q, Librizzi D, Bagheri S, Ebrahimifard A, Shamami AH. *et al.* Theranostics of Neuroendocrine Tumors: Bibliometric Study Based on Web of Science Database, 2024.
12. WHO Classification of Tumours Editorial Board. WHO Classification of Tumours: Digestive System Tumours (5th ed.). IARC, 2022.
13. Yao JC, Hassam M, Phan A, Dagohoy C, Leary C, Mares JE, Evans DB. One hundred years after "carcinoid": epidemiology of and prognostic factors for neuroendocrine tumors in 35,825 cases in the United States. *Journal of clinical oncology*. 2008; 26(18):3063-3072.