

Journal Analysis and Subject-Wise Journals Covered in the Field of Literature on Liver Diseases (2009-2013)

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Abstract - This paper presents a core journal analysis of the literature output and its subject-wise coverage of journals in the field of Liver Diseases in MEDLINE data. The literature covered in the database for the period 2009-2013 was considered. MEDLINE covered 1,00,120 records during the study period. 3607 journals were produced 38,545 journal articles. When these cited journals were divided into three zones, 71 journals fell into zone 1, accounting for 33.53% of the total number of citations. Zone 2 consisted of 367 journals, while 87.86% of the journals cited fell in Zone 3. In zone-1, out of 71 journals, 23 journals were Gastroenterology related journals, 15 in Surgery, 10 in Hepatology, 8 in General Medicine, 6 in Radiology, 4 in Oncology, 3 in Virology, 1 each in Pediatrics and Pharmacology.

In zone-1 & 2; 118 frequently cited journals were General Medicine titles, 55 in Gastroenterology, 42 in Surgery, 40 in Oncology, 32 in Radiology, 20 in Pharmacology, 16 each in Microbiology and Pathology, 14 in Hepatology, 11 in Pediatrics, 10 in Infectious Diseases, 8 each in Hematology and Veterinary Medicine. 7 in Virology, 6 each in Biochemistry and Molecular Biology, 4 in Nephrology, 3 each in Dermatology, Epidemiology, Nutrition, 2 each in Experimental Medicine, Genetics, Laboratory Medicine and Rheumatology, 1 each in HIV/AIDS, Embryology, Endocrinology, Forensic Medicine, Neurology, Obstetrics & Gynecology, Public Health and Respiratory Medicine.

Keywords: Liver Diseases, Bradford's Law and Core Journals

I. INTRODUCTION

The term bibliometrics was introduced only in 1969. It indicates a new discipline and employs quantitative methods for analyzing various aspects of written documents. It applies mathematical and statistical analysis to bibliographical units.¹ Bibliometric analysis throws light on the pattern of growth of literature, inter-relationship among different branches of knowledge, productivity, authorship pattern, and degree of collaboration, pattern of collection building, and their use.² Scientometrics investigates quantitative aspects of science; it is the quantitative of the Science of Science, of Scientific Communication Studies and Science Policy Studies.³

In this paper an attempt has been made to bring the core journals in the field of Liver Diseases and its subject-wise coverage of journals.

II. LIVER DISEASES

Liver Disease is a type of damage to or disease of the liver. The symptoms related to liver dysfunction include both physical signs and a variety of symptoms related to digesting problems, coagulopathies, blood sugar problems, immune disorders, abnormal absorption of fats, and metabolism problems.⁴

III. LITERATURE REVIEW

Several studies on mapping have analyzed allied health journal citations to determine lists of core journals in their fields.⁵⁻¹⁷ Ramakrishnan and Rajendran¹⁸ studied on Hepatitis B. Krishnamoorthy, Ramakrishnan and Devi¹⁹ studied on diabetes, Ramesh Babu and Ramakrishnan²⁰ studied on Indian Contributions to the field of HIV/AIDS. Ramakrishnan and Thavamani²¹ studied on Hepatitis C and they identified core journals.

The review of literature on core journals analysis revealed that so far no quantitative study on "Liver Diseases" was conducted. Hence the present study.

IV. OBJECTIVES

The objectives of this paper are:

- i. To examine the growth of "Liver Diseases" literature in MEDLINE database; and
- ii. To identify the core journals and its subject-wise coverage and Bradford's Law of scattering used to identify the same.

V. METHODOLOGY

The records published during the year 2009 to 2013 in the field of Liver Diseases in the MEDLINE data which are covered in the Pubmed (www.pubmed.com) which is a free resource that is developed and maintained by the National Center for Biotechnology Information (NCBI), at the U.S. National Library of Medicine (NLM), located at the National Institutes of Health (NIH) was searched and bibliographic details like author, title, publication type, language, year; address of the contributors, country of publications, source etc. were collected. The retrieved records were converted into FoxPro and loaded in SPSS for

the purpose of analysis. The keyword ‘Liver Diseases’ has been used for extracting the number of records available in the above said database. In order to determine the core journals Bradford’s law²² of scattering has been used to bring the core journals in the field of Liver Diseases. Three zones are their marked off. Each zone comprises one-third of the total citations. Journals in zone 1 are cited most frequently, that in zone 2 are cited less often, and those in zone 3 are cited least.

A. Limitations

This study is confined to a period from 2009 to 2013 MEDLINE data which are covered in Pubmed only.

VI. ANALYSIS AND DISCUSSION

The data in table-1 provides a picture of Liver Diseases literature covered by year wise in the database studied. MEDLINE covered 1,00,120 records during the study period 2009 to 2013.

TABLE I YEAR WISE

Year	Frequency	Percent
2009	17,992	17.97
2010	19,301	19.28
2011	20,567	20.54
2012	22,268	22.24
2013	19,992	19.97
Total	1,00,120	100.00

The data about the total of Liver Diseases literature covered in the MEDLINE is shown in Figure-1. The year 2012

recorded the maximum of 22,268 records and the lowest in the year 2009 with 17,992 records in the study period.

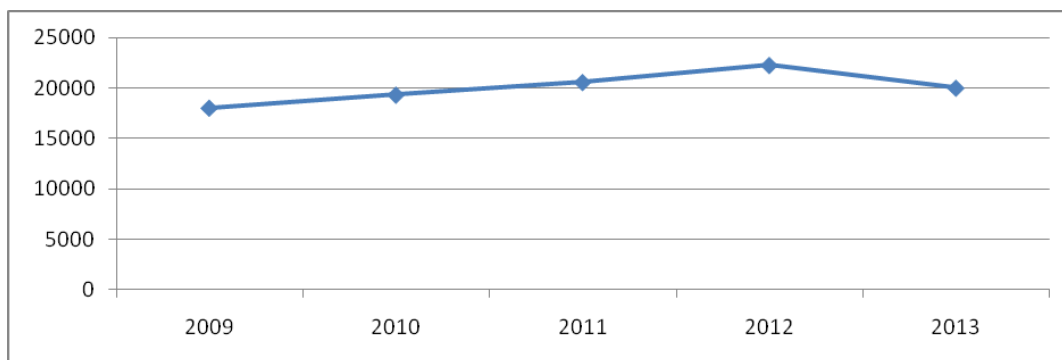


Fig.1 Year wise Distribution of Output

TABLE II DISTRIBUTION OF PUBLICATION TYPES IN THE LITERATURE OF LIVER DISEASES

S.No.	Pub. type	No.of records	%	Rank
1	Journal Article	38,545	38.50	1
2	Research Support, Non-U.S. Gov't	34,971	34.93	2
3	Review	13,127	13.11	3
4	Letter	4,050	4.05	4
5	Research Support, N.I.H., Extramural	3,133	3.13	5
6	Editorial	1,460	1.46	6
7	Research Support, U.S. Gov't Non-P.H.S.	1,423	1.42	7
8	Randomized Controlled	667	0.67	8
9	Multicenter Study	642	0.64	9
10	Validation Studies	423	0.42	10
11	Research Support, U.S. Gov't P.H.S.	384	0.38	11
12	Research Support, N.I.H., Intramural	362	0.36	12
13	News	269	0.27	13
14	Others	664	0.66	
	Total	1,00,120	100.00	

Table II shows that 38.50% (38,545) of all the cited records were “Journal Article” and the rest were “Research Support, Non-U.S. Gov't” (34.93%), “Review” (13.11%), “Letter” (4.05%), “Research Support, N.I.H., Extramural” (3.13%), “Editorial” (1.46%), “Research Support, U.S. Gov't Non-

P.H.S.” (1.42%), “Randomized Controlled” (0.67%), “Multicenter Study” (0.64%), “Validation Studies” (0.42%), “Research Support, U.S. Gov't P.H.S.” (0.38%), “Research Support, N.I.H., Intramural” (0.36%), “News” (0.27%), “Others” (0.66%) in the MEDLINE database. (Figure-2).

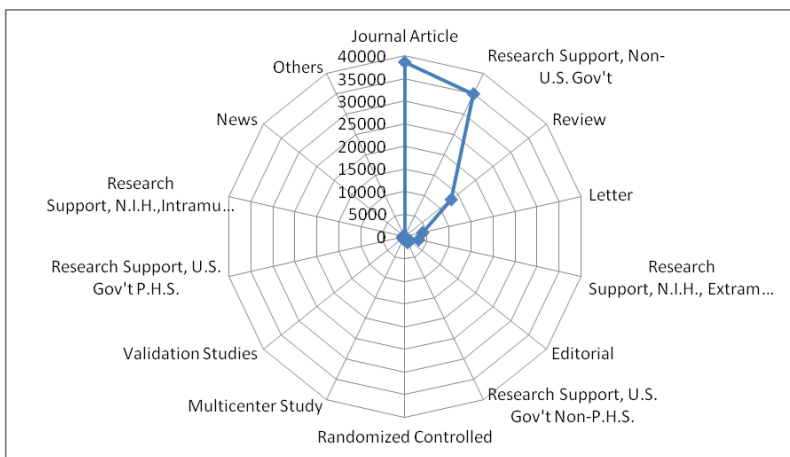


Fig. 2 Distribution of Publication types in the literature of Liver Diseases

As shown in the Table III distribution by zone of cited journals and articles in the field of Liver Diseases in the database. A total of 3,607 journals were produced 38,545 journal articles. When these cited journals were divided into

three zones, only 71 journals fell into zone 1, accounting for 33.53% of the total number of citations. Zone 2 consisted of 367 journals, while 87.86% of the journals cited fell in Zone 3. (Fig.-3).

TABLE III DISTRIBUTION BY ZONE OF CITED JOURNALS AND ARTICLES IN LIVER DISEASES

Zone	No. of Journals		No. of articles	
	No.	(%)	No.	(%)
Zone 1	71	1.97	12,924	33.53
Zone 2	367	10.17	13,045	33.84
Zone 3	3,169	87.86	12,576	32.63
Total	3,607	100.00	38,545	100.00

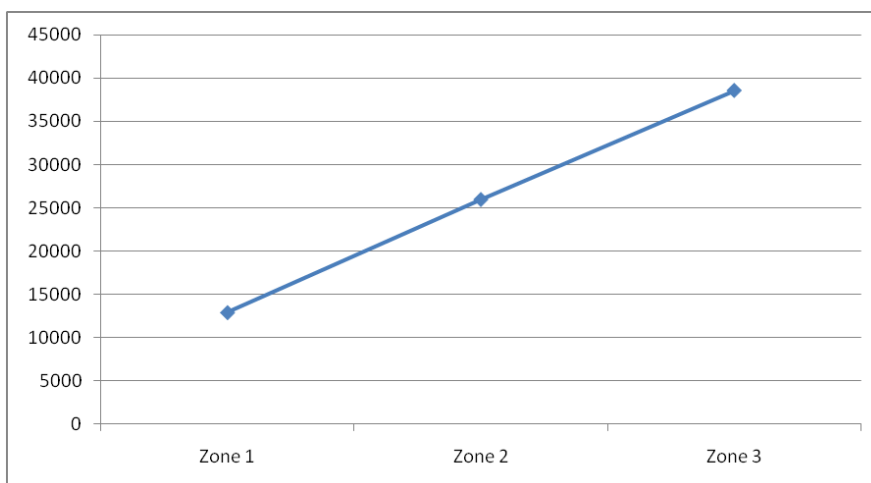


Fig. 3 Distributions of Journals by Zones

Table IV shows that the most frequently cited journals are Gastroenterology titles with 32.39%. Of the 71 titles in zone-1, 23 in Gastroenterology, 15 in Surgery, 10 in

Hepatology, 8 in General Medicine, 6 in Radiology, 4 in Oncology, 3 in Virology, 1 each in Pediatrics and Pharmacology subjects are covered. (Fig.-4)

TABLE IV SUBJECT WISE COVERAGE OF ZONE-1 JOURNALS IN LIVER DISEASES

S. No.	Subject	Frequency	%	Cumulative %
1	Gastroenterology	23	32.39	32.39
2	Surgery	15	21.13	53.52
3	Hepatology	10	14.08	67.61
4	General Medicine	8	11.27	78.87
5	Radiology	6	8.45	87.32
6	Oncology	4	5.63	92.96
7	Virology	3	4.23	97.18
8	Pediatrics	1	1.41	98.59
9	Pharmacology	1	1.41	100.00
	Total	71	100.00	

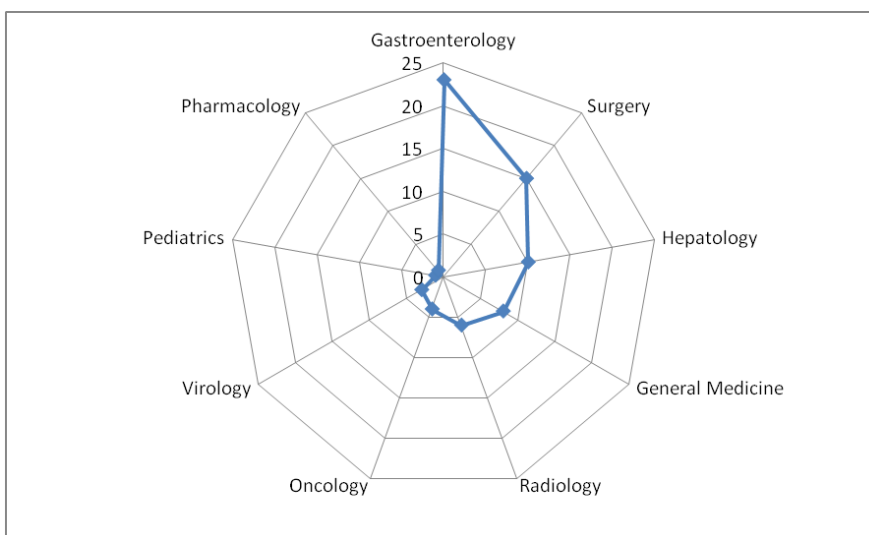


Fig. 4 Subject wise coverage of Zone-1 journals in Liver Diseases

Table V shows that in zone-2; 110 cited journals were in General Medicine titles, 36 in Oncology, 32 in Gastroenterology, 27 in Surgery, 26 in Radiology, 19 in Pharmacology, 16 each in Microbiology and Pathology, 10 each in Infectious Diseases and Pediatrics, 8 each in Hematology and Veterinary Medicine, 6 each in Biochemistry and Molecular Biology, 4 each in Hepatology,

Nephrology and Virology, 3 each in Dermatology, Epidemiology and Nutrition, 2 each in Experimental Medicine, Genetics, Laboratory Medicine and Rheumatology and 1 each in HIV/AIDS, Embryology, Endocrinology, Forensic Medicine, Neurology, Obstetrics & Gynecology, Public Health and Respiratory Medicine. (Fig.-5)

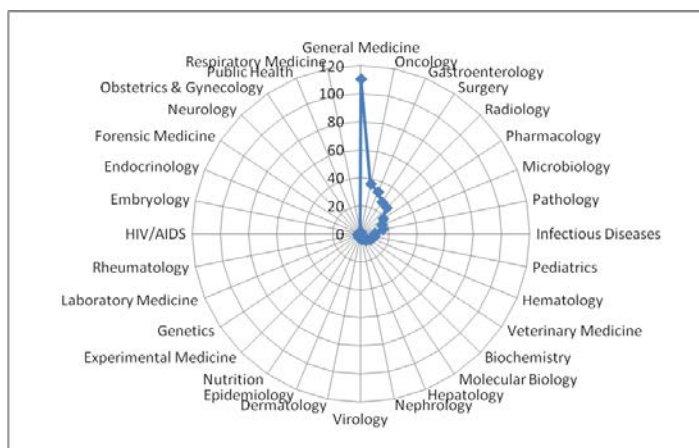


Fig.5 Subject wise coverage of Zone-2 journals in Liver Diseases

TABLE V SUBJECT WISE COVERAGE OF ZONE-2 JOURNALS IN LIVER DISEASES

S. No.	Subject	Frequency	%	Cumulative %
1.	General Medicine	110	29.97	29.97
2.	Oncology	36	9.81	39.78
3.	Gastroenterology	32	8.72	48.50
4.	Surgery	27	7.36	55.86
5.	Radiology	26	7.08	62.94
6.	Pharmacology	19	5.18	68.12
7.	Microbiology	16	4.36	72.48
8.	Pathology	16	4.36	76.84
9.	Infectious Diseases	10	2.72	79.56
10.	Pediatrics	10	2.72	82.29
11.	Hematology	8	2.18	84.47
12.	Veterinary Medicine	8	2.18	86.65
13.	Biochemistry	6	1.63	88.28
14.	Molecular Biology	6	1.63	89.92
15.	Hepatology	4	1.09	91.01
16.	Nephrology	4	1.09	92.10
17.	Virology	4	1.09	93.19
18.	Dermatology	3	0.82	94.01
19.	Epidemiology	3	0.82	94.82
20.	Nutrition	3	0.82	95.64
21.	Experimental Medicine	2	0.54	96.19
22.	Genetics	2	0.54	96.73
23.	Laboratory Medicine	2	0.54	97.28
24.	Rheumatology	2	0.54	97.82
25.	HIV/AIDS	1	0.27	98.09
26.	Embryology	1	0.27	98.37
27.	Endocrinology	1	0.27	98.64
28.	Forensic Medicine	1	0.27	98.91
29.	Neurology	1	0.27	99.18
30.	Obstetrics & Gynecology	1	0.27	99.46
31.	Public Health	1	0.27	99.73
32.	Respiratory Medicine	1	0.27	100.00
	Total	367	100.00	

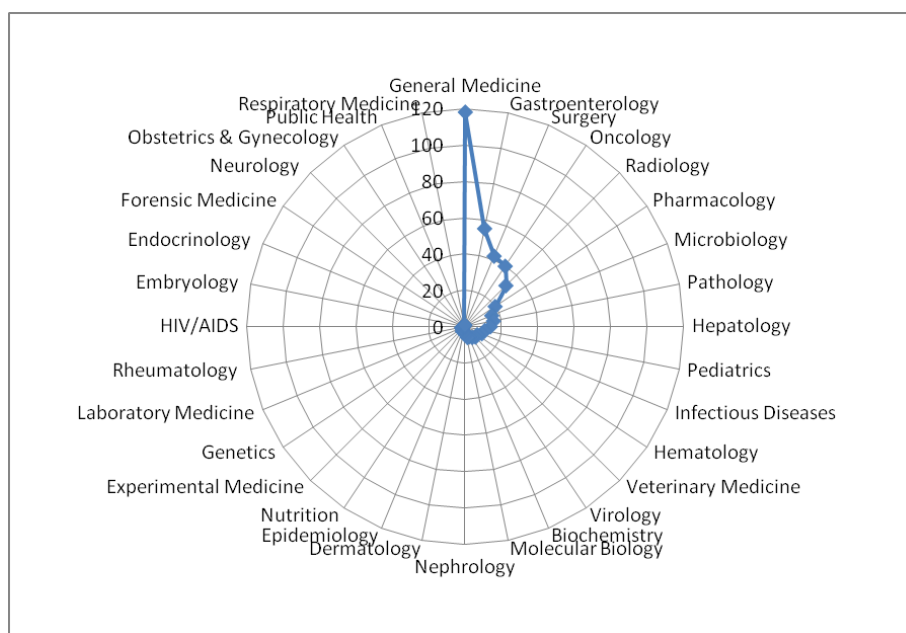


Fig. 6 Subject wise coverage of Zone1 & 2 journals in Liver Diseases

TABLE VI SUBJECT WISE COVERAGE OF ZONE1 & 2 JOURNALS IN LIVER DISEASES

S. No.	Subject	Frequency	Percent	Cumulative Percent
1	General Medicine	118	26.94	26.94
2	Gastroenterology	55	12.56	39.50
3	Surgery	42	9.59	49.09
4	Oncology	40	9.13	58.22
5	Radiology	32	7.31	65.53
6	Pharmacology	20	4.57	70.09
7	Microbiology	16	3.65	73.74
8	Pathology	16	3.65	77.40
9	Hepatology	14	3.20	80.59
10	Pediatrics	11	2.51	83.11
11	Infectious Diseases	10	2.28	85.39
12	Hematology	8	1.83	87.21
13	Veterinary Medicine	8	1.83	89.04
14	Virology	7	1.60	90.64
15	Biochemistry	6	1.37	92.01
16	Molecular Biology	6	1.37	93.38
17	Nephrology	4	0.91	94.29
18	Dermatology	3	0.68	94.98
19	Epidemiology	3	0.68	95.66
20	Nutrition	3	0.68	96.35
21	Experimental Medicine	2	0.46	96.80
22	Genetics	2	0.46	97.26
23	Laboratory Medicine	2	0.46	97.72
24	Rheumatology	2	0.46	98.17
25	HIV/AIDS	1	0.23	98.40
26	Embryology	1	0.23	98.63
27	Endocrinology	1	0.23	98.86
28	Forensic Medicine	1	0.23	99.09
29	Neurology	1	0.23	99.32
30	Obstetrics & Gynecology	1	0.23	99.54
31	Public Health	1	0.23	99.77
32	Respiratory Medicine	1	0.23	100.00
	Total	438	100.00	

Table VI shows that in zone-1 & 2; 118 frequently cited journals are General Medicine titles, 55 in Gastroenterology, 42 in Surgery, 40 in Oncology, 32 in Radiology, 20 in Pharmacology, 16 each in Microbiology and Pathology, 14 in Hepatology, 11 in Pediatrics, 10 in Infectious Diseases, 8 each in Hematology and Veterinary Medicine. 7 in Virology, 6 each in Biochemistry and Molecular Biology, 4 in Nephrology, 3 each in Dermatology, Epidemiology, Nutrition, 2 each in Experimental Medicine, Genetics, Laboratory Medicine and Rheumatology, 1 each in HIV/AIDS, Embryology, Endocrinology, Forensic Medicine, Neurology, Obstetrics

& Gynecology, Public Health and Respiratory Medicine. (Fig.-6)

The list of the core journals (Table VII) showed that the Transplantation proceedings, Gan to kagaku ryoho. Cancer & chemotherapy, World journal of gastroenterology : WJG, Zhonghua gan zang bing za zhi = Zhonghua ganzangbing zazhi = Chinese journal, Hepato-gastroenterology, Liver transplantation, Digestive and liver disease, Journal of hepatology, Hepatology (Baltimore, Md.) and Liver international are the top 10 cited journal as far as the Liver Diseases research concerned.

TABLE VII CORE JOURNALS IN THE FIELD OF LIVER DISEASES

S.No.	Name of the Journal	No. of Records	%
1.	Transplantation proceedings	743	1.93
2.	Gan to kagaku ryoho. Cancer & chemotherapy	567	1.47
3.	World journal of gastroenterology : WJG	504	1.31
4.	Zhonghua gan zang bing za zhi = Zhonghua ganzangbing zazhi = Chinese journal	436	1.13
5.	Hepato-gastroenterology	408	1.06
6.	Liver transplantation	357	0.93
7.	Digestive and liver disease	342	0.89
8.	Journal of hepatology	333	0.86
9.	Hepatology (Baltimore, Md.)	323	0.84
10.	Liver international	308	0.80
11.	Journal of gastroenterology and hepatology	283	0.73
12.	Hepatology research : the official journal of the Japan Society of Hepatology	282	0.73
13.	Digestive diseases and sciences	272	0.71
14.	Annals of hepatology	237	0.61
15.	BMJ case reports	235	0.61
16.	European journal of gastroenterology & hepatology	206	0.53
17.	Annals of surgical oncology	189	0.49
18.	European journal of radiology	187	0.49
19.	HPB : the official journal of the International Hepato Pancreato Biliary	186	0.48
20.	Clinical gastroenterology and hepatology : the official clinical practice journal	175	0.45
21.	Journal of viral hepatitis	175	0.45
22.	Pediatric transplantation	175	0.45
23.	Gut and liver	167	0.43
24.	Journal of vascular and interventional radiology : JVIR	167	0.43
25.	Internal medicine (Tokyo, Japan)	165	0.43
26.	Journal of pediatric gastroenterology and nutrition	163	0.42
27.	Hepatitis monthly	160	0.42
28.	Journal of gastrointestinal surgery : official journal of the Society for Surgery	159	0.41
29.	Gastroenterology	158	0.41
30.	World journal of surgery	157	0.41
31.	AJR. American journal of roentgenology	155	0.40
32.	PloS one	154	0.40
33.	Clinical transplantation	152	0.39
34.	Cardiovascular and interventional radiology	148	0.38
35.	The Journal of surgical research	143	0.37
36.	Journal of gastrointestinal and liver diseases : JGLD	139	0.36
37.	Nihon Shokakibyō Gakkai zasshi = The Japanese journal of gastro-enterology	139	0.36
38.	Journal of medical virology	135	0.35
39.	Clinics and research in hepatology and gastroenterology	134	0.35
40.	Journal of pediatric surgery	134	0.35
41.	Transplantation	134	0.35
42.	Anticancer research	132	0.34
43.	Surgery today	128	0.33
44.	Asian Pacific journal of cancer prevention : APJCP	123	0.32
45.	Journal of gastroenterology	122	0.32
46.	World journal of hepatology	121	0.31
47.	Radiology	119	0.31
48.	Journal of clinical gastroenterology	118	0.31
49.	Alimentary pharmacology & therapeutics	112	0.29
50.	Journal of magnetic resonance imaging : JMRI	110	0.29
51.	American journal of transplantation	109	0.28
52.	Annals of surgery	109	0.28
53.	Hepatobiliary & pancreatic diseases international : HBPDI	107	0.28

S.No.	Name of the Journal	No. of Records	%
54.	Eksperimental'naia i klinicheskaiia gastroenterologii = Experimental & clinical	105	0.27
55.	Journal of surgical oncology	105	0.27
56.	The Korean journal of gastroenterology = Taehan Sohwagi Hakhoe chi	104	0.27
57.	The Korean journal of hepatology	104	0.27
58.	Gut	103	0.27
59.	Nihon rinsho. Japanese journal of clinical medicine	103	0.27
60.	Transplant international : official journal of the European Society for Organ	98	0.25
61.	The Turkish journal of gastroenterology : the official journal of Turkish Society	97	0.25
62.	Surgical endoscopy	96	0.25
63.	Gastroenterologie clinique et biologique	95	0.25
64.	The British journal of surgery	94	0.24
65.	European radiology	93	0.24
66.	Gastrointestinal endoscopy	92	0.24
67.	European journal of surgical oncology : the journal of the European Society of	91	0.24
68.	Journal of clinical virology : the official publication of the Pan American	91	0.24
69.	Surgery	90	0.23
70.	Zhonghua shi yan he lin chuang bing du xue za zhi = Zhonghua shiyan he lincuang	85	0.22
71.	Virology journal	82	0.21
72.	The American surgeon	81	0.21
73.	Scandinavian journal of gastroenterology	80	0.21
74.	Gastroenterologia y hepatologia	79	0.20
75.	Endoscopy	78	0.20
76.	Vaccine	78	0.20
77.	Indian journal of gastroenterology	76	0.20
78.	Journal of hepato-biliary-pancreatic sciences	75	0.19
79.	Clinical nuclear medicine	74	0.19
80.	Journal of the College of Physicians and Surgeons--Pakistan : JCPSP	74	0.19
81.	Saudi journal of gastroenterology : official journal of the Saudi	72	0.19
82.	Revista medico-chirurgicala a Societatii de Medici si Naturalisti din Iasi	71	0.18
83.	Zeitschrift fur Gastroenterologie	71	0.18
84.	Chinese medical journal	70	0.18
85.	Journal of clinical oncology	70	0.18
86.	Khirurgiia	70	0.18
87.	Zhonghua yi xue za zhi	70	0.18
88.	American journal of surgery	69	0.18
89.	Evidence-based complementary and alternative medicine : eCAM	69	0.18
90.	Zhonghua zhong liu za zhi [Chinese journal of oncology]	69	0.18
91.	Abdominal imaging	68	0.18
92.	Deutsche medizinische Wochenschrift (1946)	68	0.18
93.	World journal of surgical oncology	67	0.17
94.	JPMA. The Journal of the Pakistan Medical Association	66	0.17
95.	The British journal of radiology	66	0.17
96.	Experimental and clinical transplantation : official journal of the Middle East	65	0.17
97.	Medical oncology (Northwood, London, England)	65	0.17
98.	Japanese journal of radiology	64	0.17
99.	Journal of medical case reports	64	0.17
100.	Journal of the American College of Surgeons	64	0.17
101.	Oncology reports	64	0.17
102.	Transplant infectious disease : an official journal of the Transplantation	64	0.17
103.	International journal of hepatology	63	0.16

S.No.	Name of the Journal	No. of Records	%
104.	Tropical gastroenterology : official journal of the Digestive Diseases Foundation	63	0.16
105.	Hepatology international	62	0.16
106.	Journal of computer assisted tomography	62	0.16
107.	Oncology	61	0.16
108.	BMC gastroenterology	60	0.16
109.	Clinical radiology	59	0.15
110.	Surgical laparoscopy, endoscopy & percutaneous techniques	59	0.15
111.	The American journal of gastroenterology	59	0.15
112.	Archives of surgery (Chicago, Ill. : 1960)	58	0.15
113.	Methods in molecular biology (Clifton, N.J.)	58	0.15
114.	Food and chemical toxicology : an international journal published for the British	57	0.15
115.	Revue medicale suisse	57	0.15
116.	International journal of radiation oncology, biology, physics	56	0.15
117.	Nederlands tijdschrift voor geneeskunde	56	0.15
118.	Terapevticheskii arkhiv	56	0.15
119.	Przeegląd epidemiologiczny	55	0.14
120.	Xi bao yu fen zi mian yi xue za zhi = Chinese journal of cellular and molecular	55	0.14
121.	Journal of clinical microbiology	53	0.14
122.	Klinichna khirurhiia / Ministerstvo okhorony zdorov'ia Ukrainy, Naukove	53	0.14
123.	Annals of transplantation : quarterly of the Polish Transplantation Society	52	0.13
124.	Antiviral therapy	52	0.13
125.	Chirurgia (Bucharest, Romania : 1990)	52	0.13
126.	Revista espanola de enfermedades digestivas : organo oficial de la Sociedad	52	0.13
127.	Arquivos de gastroenterologia	51	0.13
128.	Canadian journal of gastroenterology = Journal canadien de gastroenterologie	51	0.13
129.	International journal of infectious diseases : IJID	51	0.13
130.	Langenbeck's archives of surgery / Deutsche Gesellschaft fur Chirurgie	51	0.13
131.	Pediatric blood & cancer	51	0.13
132.	Zhongguo Zhong yao za zhi = Zhongguo zhongyao zazhi = China journal of Chinese	51	0.13
133.	American journal of physiology. Gastrointestinal and liver physiology	50	0.13
134.	Cancer	50	0.13
135.	Journal of medicinal chemistry	50	0.13
136.	Journal of pediatric hematology/oncology	50	0.13
137.	Tumori	50	0.13
138.	Arab journal of gastroenterology : the official publication of the Pan-Arab	49	0.13
139.	Human pathology	49	0.13
140.	Journal of ethnopharmacology	49	0.13
141.	La Revue de medecine interne / fondee ... par la Societe nationale francaise de	49	0.13
142.	Pediatric radiology	49	0.13
143.	Pediatric surgery international	49	0.13
144.	Bioorganic & medicinal chemistry letters	48	0.12
145.	BMC cancer	48	0.12
146.	Oncology letters	48	0.12
147.	Archives de pediatrie : organe officiel de la Societe francaise de pediatrie	47	0.12
148.	Epidemiology and infection	47	0.12
149.	European journal of internal medicine	47	0.12
150.	Indian journal of pathology & microbiology	47	0.12
151.	Infection	47	0.12

S.No.	Name of the Journal	No. of Records	%
152.	The American journal of surgical pathology	47	0.12
153.	The Brazilian journal of infectious diseases : an official publication of the	47	0.12
154.	The New England journal of medicine	47	0.12
155.	Transfusion	47	0.12
156.	Case reports in gastroenterology	46	0.12
157.	Japanese journal of clinical oncology	46	0.12
158.	RoFo : Fortschritte auf dem Gebiete der Rontgenstrahlen und der Nuklearmedizin	46	0.12
159.	Ultraschall in der Medizin (Stuttgart, Germany : 1980)	46	0.12
160.	Veterinary pathology	46	0.12
161.	Clinics in liver disease	45	0.12
162.	Euro surveillance : bulletin Europeen sur les maladies transmissibles = European	45	0.12
163.	International journal of clinical oncology	45	0.12
164.	Singapore medical journal	45	0.12
165.	ANZ journal of surgery	44	0.11
166.	European review for medical and pharmacological sciences	44	0.11
167.	The American journal of the medical sciences	44	0.11
168.	Ugeskrift for laeger	44	0.11
169.	Digestive surgery	43	0.11
170.	Experimental and toxicologic pathology : official journal of the Gesellschaft fur	43	0.11
171.	Journal of ultrasound in medicine : official journal of the American Institute of	43	0.11
172.	Zhonghua wai ke za zhi [Chinese journal of surgery]	43	0.11
173.	Cirurgia espanola	42	0.11
174.	Clinical imaging	42	0.11
175.	Journal of Ayub Medical College, Abbottabad : JAMC	42	0.11
176.	Journal of the American Veterinary Medical Association	42	0.11
177.	Korean journal of radiology : official journal of the Korean Radiological Society	42	0.11
178.	Acta gastro-enterologica Belgica	41	0.11
179.	Clinical and molecular hepatology	41	0.11
180.	Journal of digestive diseases	41	0.11
181.	Journal of gastrointestinal cancer	41	0.11
182.	Acta gastroenterologica Latinoamericana	40	0.10
183.	Biochimica et biophysica acta	40	0.10
184.	Gastroenterology research and practice	40	0.10
185.	Journal of Korean medical science	40	0.10
186.	Journal of the Medical Association of Thailand = Chotmaihet thangphaet	40	0.10
187.	Orvosi hetilap	40	0.10
188.	Revista da Sociedade Brasileira de Medicina Tropical	40	0.10
189.	Cancer chemotherapy and pharmacology	39	0.10
190.	Experimental and therapeutic medicine	39	0.10
191.	Gastroenterology & hepatology	39	0.10
192.	La Radiologia medica	39	0.10
193.	Nephrology, dialysis, transplantation : official publication of the European	39	0.10
194.	Saudi journal of kidney diseases and transplantation	39	0.10
195.	Academic radiology	38	0.10
196.	Avian diseases	38	0.10
197.	Biochemical and biophysical research communications	38	0.10
198.	BMC research notes	38	0.10
199.	Investigative radiology	38	0.10
200.	Journal of laparoendoscopic & advanced surgical techniques. Part A	38	0.10
201.	MMWR. Morbidity and mortality weekly report	38	0.10
202.	The American journal of tropical medicine and hygiene	38	0.10
203.	The Journal of veterinary medical science / the Japanese Society	38	0.10

S.No.	Name of the Journal	No. of Records	%
	of Veterinary		
204.	European journal of nuclear medicine and molecular imaging	37	0.10
205.	Journal of hepato-biliary-pancreatic surgery	37	0.10
206.	Journal of nuclear medicine : official publication, Society of Nuclear Medicine	37	0.10
207.	Journal of the Egyptian Society of Parasitology	37	0.10
208.	Mikrobiyoloji bulteni	37	0.10
209.	Pathology, research and practice	37	0.10
210.	The Journal of international medical research	37	0.10
211.	BMC infectious diseases	36	0.09
212.	Bulletin of experimental biology and medicine	36	0.09
213.	European journal of pharmacology	36	0.09
214.	International journal of STD & AIDS	36	0.09
215.	Journal of comparative pathology	36	0.09
216.	Journal of infection in developing countries	36	0.09
217.	Klinicheskaia meditsina	36	0.09
218.	Presse medicale (Paris, France : 1983)	36	0.09
219.	Renal failure	36	0.09
220.	The Journal of pediatrics	36	0.09
221.	Acta medica Croatica : casopis Hrvatske akademije medicinskih znanosti	35	0.09
222.	Georgian medical news	35	0.09
223.	Rheumatology international	35	0.09
224.	Turkiye parazitolojii dergisi / Turkiye Parazitoloji Dernegi = Acta	35	0.09
225.	International journal of oncology	34	0.09
226.	JOP : Journal of the pancreas	34	0.09
227.	Journal of veterinary diagnostic investigation : official publication of the	34	0.09
228.	Nan fang yi ke da xue xue bao = Journal of Southern Medical University	34	0.09
229.	The Annals of thoracic surgery	34	0.09
230.	Veterinary parasitology	34	0.09
231.	Acta radiologica (Stockholm, Sweden : 1987)	33	0.09
232.	Der Internist	33	0.09
233.	Intervirology	33	0.09
234.	La Tunisie medicale	33	0.09
235.	Saudi medical journal	33	0.09
236.	Tropical doctor	33	0.09
237.	American journal of clinical oncology	32	0.08
238.	BMJ (Clinical research ed.)	32	0.08
239.	Case reports in medicine	32	0.08
240.	European journal of pediatrics	32	0.08
241.	Indian journal of pediatrics	32	0.08
242.	Journal of clinical pathology	32	0.08
243.	Journal of microbiology, immunology, and infection = Wei mian yu gan ran za zhi	32	0.08
244.	Lancet	32	0.08
245.	Medical hypotheses	32	0.08
246.	Nuclear medicine communications	32	0.08
247.	Onkologie	32	0.08
248.	Praxis	32	0.08
249.	QJM : monthly journal of the Association of Physicians	32	0.08
250.	The Annals of pharmacotherapy	32	0.08
251.	Toxicologic pathology	32	0.08
252.	Archives of Iranian medicine	31	0.08
253.	Clinica chimica acta; international journal of clinical chemistry	31	0.08
254.	Histopathology	31	0.08
255.	International journal of cancer. Journal international du cancer	31	0.08
256.	Journal of agricultural and food chemistry	31	0.08
257.	Journal of zoo and wildlife medicine : official publication of the American	31	0.08

S.No.	Name of the Journal	No. of Records	%
258.	Molecular genetics and metabolism	31	0.08
259.	Nature reviews. Gastroenterology & hepatology	31	0.08
260.	Pathology international	31	0.08
261.	The Journal of the Association of Physicians of India	31	0.08
262.	The Pan African medical journal	31	0.08
263.	The Veterinary record	31	0.08
264.	Journal of inherited metabolic disease	30	0.08
265.	Journal of the Chinese Medical Association : JCMA	30	0.08
266.	Magnetic resonance imaging	30	0.08
267.	Parasitology research	30	0.08
268.	Pediatrics international : official journal of the Japan Pediatric Society	30	0.08
269.	Radiation oncology (London, England)	30	0.08
270.	Radiographics : a review publication of the Radiological Society of North	30	0.08
271.	Rozhledy v chirurgii : mesicnik Ceskoslovenske chirurgicke spolecnosti	30	0.08
272.	Ultrasound in medicine & biology	30	0.08
273.	Vojnosanitetski pregled. Military-medical and pharmaceutical review	30	0.08
274.	[Rinsho ketsueki] The Japanese journal of clinical hematology	29	0.08
275.	Acta cirurgica brasileira / Sociedade Brasileira para Desenvolvimento Pesquisa em	29	0.08
276.	Clinics (Sao Paulo, Brazil)	29	0.08
277.	Diagnostic and interventional radiology (Ankara, Turkey)	29	0.08
278.	Digestion	29	0.08
279.	Journal of cancer research and clinical oncology	29	0.08
280.	Journal of medicinal food	29	0.08
281.	Polski merkuriusz lekarski : organ Polskiego Towarzystwa Lekarskiego	29	0.08
282.	Zentralblatt fur Chirurgie	29	0.08
283.	Asian Pacific journal of tropical medicine	28	0.07
284.	Clinical infectious diseases : an official publication of the Infectious Diseases	28	0.07
285.	Diagnostic cytopathology	28	0.07
286.	Digestive diseases (Basel, Switzerland)	28	0.07
287.	Journal of clinical ultrasound : JCU	28	0.07
288.	Journal of the Formosan Medical Association = Taiwan yi zhi	28	0.07
289.	Przegląd lekarski	28	0.07
290.	Srpski arhiv za celokupno lekarstvo	28	0.07
291.	The American journal of medicine	28	0.07
292.	Tumour biology : the journal of the International Society for Oncodevelopmental	28	0.07
293.	Vnitřni lékařství	28	0.07
294.	Annals of Saudi medicine	27	0.07
295.	Clinical biochemistry	27	0.07
296.	Ekspiermental'naia i klinicheskaia farmakologija	27	0.07
297.	La Revue du praticien	27	0.07
298.	Molecular medicine reports	27	0.07
299.	Scandinavian journal of infectious diseases	27	0.07
300.	Therapeutic advances in gastroenterology	27	0.07
301.	American journal of hematology	26	0.07
302.	Archives of gynecology and obstetrics	26	0.07
303.	Atherosclerosis	26	0.07
304.	Cases journal	26	0.07
305.	Clinical nephrology	26	0.07
306.	HPB surgery : a world journal of hepatic, pancreatic and biliary surgery	26	0.07
307.	International journal of colorectal disease	26	0.07
308.	International journal of molecular sciences	26	0.07
309.	Metabolism: clinical and experimental	26	0.07

S.No.	Name of the Journal	No. of Records	%
310.	Pharmaceutical biology	26	0.07
311.	The American journal of emergency medicine	26	0.07
312.	Zhurnal mikrobiologii, epidemiologii, i immunobiologii	26	0.07
313.	Archives of virology	25	0.06
314.	Cancer letters	25	0.06
315.	Eastern Mediterranean health journal = La revue de sante de la Mediterranee	25	0.06
316.	European journal of clinical microbiology & infectious diseases : official	25	0.06
317.	Human & experymental toxicology	25	0.06
318.	Human genetics	25	0.06
319.	International journal of dermatology	25	0.06
320.	JIMD reports	25	0.06
321.	Journal of Crohn's & colitis	25	0.06
322.	Journal of lipid research	25	0.06
323.	Medical ultrasonography	25	0.06
324.	Prescrire international	25	0.06
325.	Zhonghua bing li xue za zhi Chinese journal of pathology	25	0.06
326.	Zhonghua liu xing bing xue za zhi = Zhonghua liuxingbingxue zazhi	25	0.06
327.	Acta chirurgica Belgica	24	0.06
328.	American journal of clinical pathology	24	0.06
329.	Blood	24	0.06
330.	Case reports in oncology	24	0.06
331.	Colorectal disease : the official journal of the Association of Coloproctology of	24	0.06
332.	Der Radiologe	24	0.06
333.	Internal medicine journal	24	0.06
334.	International journal of clinical and experimental pathology	24	0.06
335.	Journal of cancer research and therapeutics	24	0.06
336.	JPEN. Journal of parenteral and enteral nutrition	24	0.06
337.	Klinicheskaia laboratornaia diagnostika	24	0.06
338.	Minerva gastroenterologica e dietologica	24	0.06
339.	Pathologie-biologie	24	0.06
340.	Phytomedicine : international journal of phytotherapy and phytopharmacology	24	0.06
341.	Seminars in liver disease	24	0.06
342.	Southern medical journal	24	0.06
343.	Alcoholism, clinical and experimental research	23	0.06
344.	Digestive endoscopy : official journal of the Japan Gastroenterological Endoscopy	23	0.06
345.	Enfermedades infecciosas y microbiologia clinica	23	0.06
346.	Haemophilia : the official journal of the World Federation of Hemophilia	23	0.06
347.	Indian pediatrics	23	0.06
348.	International journal of molecular medicine	23	0.06
349.	Journal of pediatric endocrinology & metabolism : JPEM	23	0.06
350.	The Turkish journal of pediatrics	23	0.06
351.	Toxicology and applied pharmacology	23	0.06
352.	Virchows Archiv : an international journal of pathology	23	0.06
353.	Annals of the Royal College of Surgeons of England	22	0.06
354.	Antimicrobial agents and chemotherapy	22	0.06
355.	Biological trace element research	22	0.06
356.	British journal of cancer	22	0.06
357.	Chest	22	0.06
358.	Drug metabolism and disposition: the biological fate of chemicals	22	0.06
359.	European journal of medical research	22	0.06
360.	Hong Kong medical journal = Xianggang yi xue za zhi / Hong Kong Academy of	22	0.06
361.	JBR-BTR : organe de la Societe royale belge de radiologie (SRBR) = orgaan van de	22	0.06

S.No.	Name of the Journal	No. of Records	%
362.	Medicina clinica	22	0.06
363.	MMW Fortschritte der Medizin	22	0.06
364.	The Journal of biological chemistry	22	0.06
365.	The Journal of emergency medicine	22	0.06
366.	The Netherlands journal of medicine	22	0.06
367.	TheScientificWorldJournal	22	0.06
368.	Cancer biology & therapy	21	0.05
369.	Emerging infectious diseases	21	0.05
370.	European journal of cardio-thoracic surgery : official journal of the European	21	0.05
371.	European journal of clinical investigation	21	0.05
372.	Experimental parasitology	21	0.05
373.	Irish journal of medical science	21	0.05
374.	Journal of B.U.ON. : official journal of the Balkan Union of Oncology	21	0.05
375.	Journal of medical imaging and radiation oncology	21	0.05
376.	Journal of thoracic oncology : official publication of the International	21	0.05
377.	Le infezioni in medicina : rivista periodica di eziologia, epidemiologia,	21	0.05
378.	Medical principles and practice : international journal of the Kuwait University,	21	0.05
379.	Nutrition (Burbank, Los Angeles County, Calif.)	21	0.05
380.	Pakistan journal of biological sciences: PJBS	21	0.05
381.	Pancreas	21	0.05
382.	Revista medica de Chile	21	0.05
383.	Rinsho byori. The Japanese journal of clinical pathology	21	0.05
384.	Toxicology	21	0.05
385.	World journal of gastrointestinal oncology	21	0.05
386.	Zhongguo dang dai er ke za zhi = Chinese journal of contemporary pediatrics	21	0.05
387.	American journal of therapeutics	20	0.05
388.	Anti-cancer drugs	20	0.05
389.	Biological & pharmaceutical bulletin	20	0.05
390.	Cancer biotherapy & radiopharmaceuticals	20	0.05
391.	Clinical and experimental dermatology	20	0.05
392.	Clinical laboratory	20	0.05
393.	Clinical microbiology and infection : the official publication of the European	20	0.05
394.	Clinical rheumatology	20	0.05
395.	Critical care (London, England)	20	0.05
396.	Harefuah	20	0.05
397.	International journal of hematology	20	0.05
398.	International journal of surgery (London, England)	20	0.05
399.	Journal of Nippon Medical School = Nippon Ika Daigaku zasshi	20	0.05
400.	Journal of travel medicine	20	0.05
401.	Meditsinskaia parazitologiya i parazitarnye bolezni	20	0.05
402.	Metabolic brain disease	20	0.05
403.	Molecular biology reports	20	0.05
404.	Mymensingh medical journal : MMJ	20	0.05
405.	Pediatrics	20	0.05
406.	The Israel Medical Association journal : IMAJ	20	0.05
407.	Toxicology and industrial health	20	0.05
408.	Updates in surgery	20	0.05
409.	Voprosy onkologii	20	0.05
410.	Wiener klinische Wochenschrift	20	0.05
411.	Zhonghua nei ke za zhi	20	0.05
412.	Annales de dermatologie et de venerologie	19	0.05
413.	Annals of hematology	19	0.05
414.	British journal of haematology	19	0.05
415.	British journal of hospital medicine (London, England : 2005)	19	0.05

S.No.	Name of the Journal	No. of Records	%
416.	Chemico-biological interactions	19	0.05
417.	Cleveland Clinic journal of medicine	19	0.05
418.	Clinical cancer research : an official journal of the American Association for	19	0.05
419.	Clinical hemorheology and microcirculation	19	0.05
420.	Collegium antropologicum	19	0.05
421.	Diagnostic microbiology and infectious disease	19	0.05
422.	European journal of pediatric surgery : official journal of Austrian Association	19	0.05
423.	Forensic science international	19	0.05
424.	Interactive cardiovascular and thoracic surgery	19	0.05
425.	Journal of virology	19	0.05
426.	Kyobu geka. The Japanese journal of thoracic surgery	19	0.05
427.	Likars'ka sprava / Ministerstvo okhorony zdorov'ia Ukrainy	19	0.05
428.	Nutrition & metabolism	19	0.05
429.	Oncology (Williston Park, N.Y.)	19	0.05
430.	Revista do Colegio Brasileiro de Cirurgioes	19	0.05
431.	Romanian journal of morphology and embryology = Revue roumaine de morphologie et	19	0.05
432.	South African medical journal = Suid-Afrikaanse tydskrif vir geneeskunde	19	0.05
433.	The Journal of clinical endocrinology and metabolism	19	0.05
434.	The Journal of pharmacy and pharmacology	19	0.05
435.	The Journal of toxicological sciences	19	0.05
436.	Tidsskrift for den Norske laegeforening : tidsskrift for praktisk medicin, ny	19	0.05
437.	Veterinary radiology & ultrasound : the official journal of the American College	19	0.05
438.	World journal of radiology	19	0.05

VII. CONCLUSION

The majority of the citations were journal articles (38.50%). Among the core journals in zone-1 titles were devoted to topics in Gastroenterology, Surgery, Hepatology, General Medicine, Radiology, Oncology, Virology, Pediatrics and Pharmacology. There are 438 Journals in zone 1 & 2 which are the core journals in the field of Liver Diseases.

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