

Supplemental Material

Poorly Cited Articles in Peer-Reviewed Cardiovascular Journals: Analysis of 5-year citation rates from 1997-2007

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Supplemental Table 1: The number and proportion of poorly cited articles among included cardiovascular journals. Only journals with at least 20 publications are shown. Journals are ranked by the proportion of poorly cited articles.

Journal Name	# Poorly cited articles	# Well cited articles	Total # articles	% Poorly cited
CIRCULATION RESEARCH	32	3067	3099	1.0%
STROKE	217	4260	4477	4.8%
JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY	262	4921	5183	5.1%
HYPERTENSION	241	3199	3440	7.0%
PROGRESS IN CARDIOVASCULAR DISEASES	7	46	53	13.2%
CARDIOVASCULAR DIABETOLOGY	9	55	64	14.1%
CIRCULATION	1502	9144	10646	14.1%
JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY	285	1668	1953	14.6%
EUROPEAN HEART JOURNAL	361	2052	2413	15.0%
ATHEROSCLEROSIS	475	2658	3133	15.2%
JOURNAL OF HYPERTENSION	401	1991	2392	16.8%
HEART FAILURE REVIEWS	16	70	86	18.6%
AMERICAN HEART JOURNAL	441	1923	2364	18.7%
JOURNAL OF VASCULAR SURGERY	822	2812	3634	22.6%
EUROPEAN JOURNAL OF HEART FAILURE	196	664	860	22.8%
JOURNAL OF VASCULAR RESEARCH	134	391	525	25.5%
HYPERTENSION RESEARCH	271	778	1049	25.8%
EUROPEAN JOURNAL OF CARDIOVASCULAR PREVENTION AND REHABILITATION	95	271	366	26.0%
AMERICAN JOURNAL OF CARDIOLOGY	2004	5670	7674	26.1%
NATURE CLINICAL PRACTICE CARDIOVASCULAR MEDICINE	18	50	68	26.5%
AMERICAN JOURNAL OF HYPERTENSION	560	1542	2102	26.6%
JOURNAL OF CARDIAC FAILURE	164	437	601	27.3%
JOURNAL OF HEART AND LUNG TRANSPLANTATION	561	1386	1947	28.8%
DIABETES AND VASCULAR DISEASE RESEARCH	8	19	27	29.6%
HEART RHYTHM	225	512	737	30.5%
JOURNAL OF ENDOVASCULAR THERAPY	256	547	803	31.9%
BMC CARDIOVASCULAR DISORDERS	47	94	141	33.3%
EUROPEAN JOURNAL OF CARDIOVASCULAR NURSING	44	88	132	33.3%
BASIC RESEARCH IN CARDIOLOGY	183	350	533	34.3%
SEMINARS IN VASCULAR SURGERY	33	62	95	34.7%
CIRCULATION JOURNAL	563	1016	1579	35.7%
MICROVASCULAR RESEARCH	249	438	687	36.2%
RESUSCITATION	546	953	1499	36.4%
JOURNAL OF CARDIOVASCULAR ELECTROPHYSIOLOGY	770	1340	2110	36.5%
JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY	1717	2972	4689	36.6%

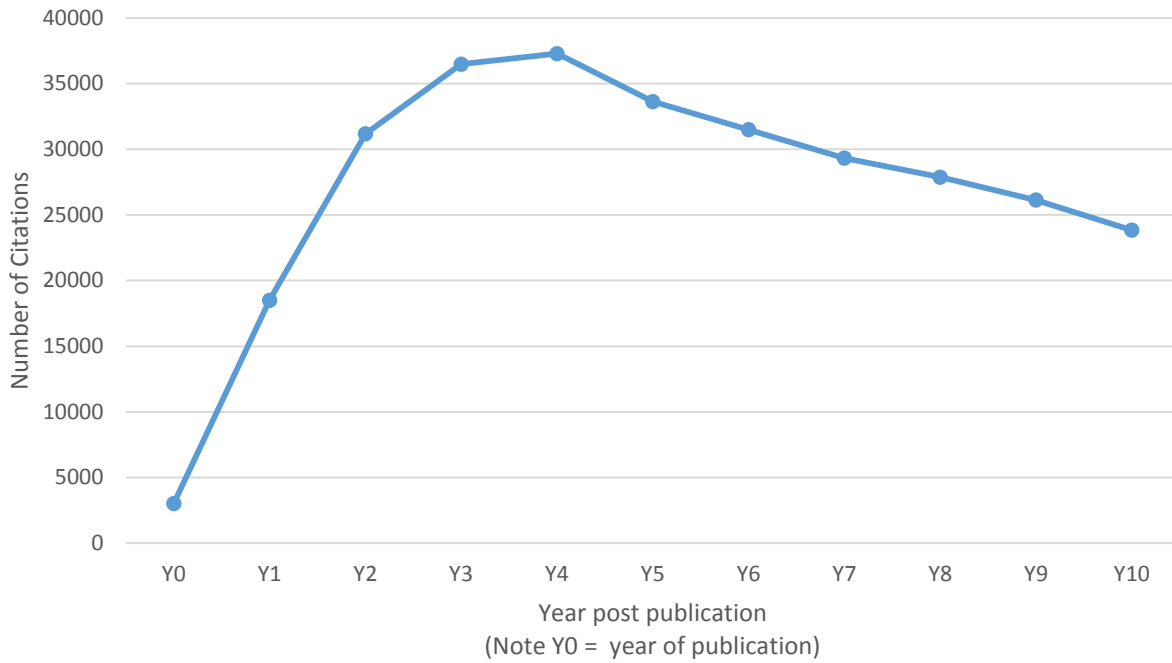
JOURNAL OF ATHEROSCLEROSIS AND THROMBOSIS	101	161	262	38.5%
CLINICAL RESEARCH IN CARDIOLOGY	56	87	143	39.2%
JOURNAL OF CARDIOVASCULAR MAGNETIC RESONANCE	119	182	301	39.5%
EUROPEAN JOURNAL OF VASCULAR AND ENDOVASCULAR SURGERY	840	1266	2106	39.9%
ANNALS OF THORACIC SURGERY	3370	4978	8348	40.4%
SEMINARS IN THORACIC AND CARDIOVASCULAR SURGERY	167	239	406	41.1%
JOURNAL OF CARDIOVASCULAR NURSING	33	47	80	41.3%
JOURNAL OF CARDIOVASCULAR PHARMACOLOGY	1131	1509	2640	42.8%
THROMBOSIS RESEARCH	870	1138	2008	43.3%
JOURNAL OF NUCLEAR CARDIOLOGY	339	415	754	45.0%
EUROPEAN JOURNAL OF CARDIOTHORACIC SURGERY	1538	1772	3310	46.5%
VASCULAR MEDICINE	156	177	333	46.8%
BLOOD PRESSURE MONITORING	183	203	386	47.4%
ANNALS OF VASCULAR SURGERY	485	492	977	49.6%
AMERICAN JOURNAL OF CARDIOVASCULAR DRUGS	12	12	24	50.0%
NUTRITION METABOLISM AND CARDIOVASCULAR DISEASES	248	246	494	50.2%
JOURNAL OF CARDIOPULMONARY REHABILITATION AND PREVENTION	19	18	37	51.4%
EUROPACE	434	404	838	51.8%
REVIEWS IN CARDIOVASCULAR MEDICINE	64	59	123	52.0%
HEART AND LUNG JOURNAL OF ACUTE AND CRITICAL CARE	285	262	547	52.1%
INTERNATIONAL JOURNAL OF CARDIOLOGY	1966	1759	3725	52.8%
JOURNAL OF CARDIOVASCULAR PHARMACOLOGY AND THERAPEUTICS	158	134	292	54.1%
CORONARY ARTERY DISEASE	400	329	729	54.9%
JOURNAL OF HEART VALVE DISEASE	694	556	1250	55.5%
PACING AND CLINICAL ELECTROPHYSIOLOGY PACE	1583	1265	2848	55.6%
BLOOD PRESSURE	279	220	499	55.9%
JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY	1241	962	2203	56.3%
HEART	2541	1888	4429	57.4%
CARDIOLOGY	477	350	827	57.7%
VASCULAR AND ENDOVASCULAR SURGERY	199	145	344	57.8%
EUROPEAN JOURNAL OF ECHOCARDIOGRAPHY	274	198	472	58.1%
VASCULAR HEALTH AND RISK MANAGEMENT	18	13	31	58.1%
PREVENTIVE CARDIOLOGY	39	28	67	58.2%
INTERNATIONAL HEART JOURNAL	168	117	285	58.9%
HEART AND VESSELS	323	222	545	59.3%
JOURNAL OF THROMBOSIS AND THROMBOLYSIS	316	212	528	59.8%
CONGESTIVE HEART FAILURE	89	57	146	61.0%
VASCULAR	112	69	181	61.9%
JOURNAL OF CARDIOTHORACIC SURGERY	54	33	87	62.1%
JOURNAL OF CARDIOTHORACIC AND VASCULAR ANESTHESIA	865	526	1391	62.2%
JOURNAL OF THE AMERICAN SOCIETY OF HYPERTENSION	19	11	30	63.3%
INTERNATIONAL JOURNAL OF CARDIOVASCULAR IMAGING	298	169	467	63.8%
INTERNATIONAL ANGIOLOGY	350	196	546	64.1%

ANGIOLOGY	831	465	1296	64.1%
CANADIAN JOURNAL OF CARDIOLOGY	742	414	1156	64.2%
JOURNAL OF INTERVENTIONAL CARDIAC ELECTROPHYSIOLOGY	383	207	590	64.9%
JOURNAL OF CARDIOVASCULAR NURSING	49	25	74	66.2%
PERFUSION	441	224	665	66.3%
ACTA MYOLOGICA	14	7	21	66.7%
CURRENT OPINION IN CARDIOLOGY	49	24	73	67.1%
PEDIATRIC CARDIOLOGY	749	366	1115	67.2%
CLINICAL CARDIOLOGY	923	450	1373	67.2%
CARDIOLOGY IN REVIEW	95	44	139	68.3%
CURRENT CARDIOLOGY REPORTS	151	69	220	68.6%
JOURNAL OF ELECTROCARDIOLOGY	458	206	664	69.0%
THORACIC AND CARDIOVASCULAR SURGEON	687	295	982	70.0%
SCANDINAVIAN CARDIOVASCULAR JOURNAL	453	192	645	70.2%
ECHOCARDIOGRAPHY	924	390	1314	70.3%
ANNALS OF NONINVASIVE ELECTROCARDIOLOGY	331	139	470	70.4%
JOURNAL OF INTERVENTIONAL CARDIOLOGY	366	151	517	70.8%
JAPANESE CIRCULATION JOURNAL	645	260	905	71.3%
HERZ	422	169	591	71.4%
JOURNAL OF INVASIVE CARDIOLOGY	1055	413	1468	71.9%
EXPERT REVIEW OF CARDIOVASCULAR THERAPY	17	6	23	73.9%
JOURNAL OF CARDIAC SURGERY	561	197	758	74.0%
ACUTE CARDIAC CARE	43	15	58	74.1%
REVISTA ESPANOLA DE CARDIOLOGIA	1195	416	1611	74.2%
CONGENITAL HEART DISEASE	70	24	94	74.5%
TEXAS HEART INSTITUTE JOURNAL	581	199	780	74.5%
INTERNATIONAL JOURNAL OF STROKE	41	14	55	74.5%
PEDIATRIC CARDIAC SURGERY ANNUAL	51	17	68	75.0%
CARDIOLOGY IN THE YOUNG	861	282	1143	75.3%
CURRENT HYPERTENSION REPORTS	77	25	102	75.5%
JOURNAL OF CARDIOVASCULAR MEDICINE	208	67	275	75.6%
JOURNAL OF CARDIOVASCULAR COMPUTED TOMOGRAPHY	19	6	25	76.0%
JOURNAL OF CARDIOVASCULAR SURGERY	1008	308	1316	76.6%
JOURNAL OF CLINICAL LIPIDOLOGY	20	6	26	76.9%
HEART LUNG CIRCULATION	220	65	285	77.2%
ACTA CARDIOLOGICA	559	155	714	78.3%
HEART SURGERY FORUM	402	111	513	78.4%
PERSPECTIVES IN VASCULAR SURGERY AND ENDOVASCULAR THERAPY	70	19	89	78.7%
PHLEBOLOGY	216	51	267	80.9%
EVIDENCE AND POLICY	35	8	43	81.4%
INTERACTIVE CARDIOVASCULAR AND THORACIC SURGERY	561	123	684	82.0%
ANNALS OF THORACIC AND CARDIOVASCULAR SURGERY	68	14	82	82.9%
GENERAL THORACIC AND CARDIOVASCULAR SURGERY	91	17	108	84.3%
HEART SURGERY FORUM	443	78	521	85.0%

BRAZILIAN JOURNAL OF CARDIOVASCULAR SURGERY	113	17	130	86.9%
PHLEBOLOGIE	185	27	212	87.3%
ANNALS OF THORACIC MEDICINE	28	4	32	87.5%
AMERICAN JOURNAL OF GERIATRIC CARDIOLOGY	94	13	107	87.9%
JOURNAL DES MALADIES VASCULAIRES	283	37	320	88.4%
INDIAN HEART JOURNAL	738	93	831	88.8%
EXPERIMENTAL AND CLINICAL CARDIOLOGY	123	15	138	89.1%
JOURNAL OF INVASIVE CARDIOLOGY	41	5	46	89.1%
ARQUIVOS BRASILEIROS DE CARDIOLOGIA	1713	185	1898	90.3%
JOURNAL OF CARDIOLOGY	908	97	1005	90.3%
NETHERLANDS HEART JOURNAL	175	18	193	90.7%
HELLENIC JOURNAL OF CARDIOLOGY	281	27	308	91.2%
PROGRESS IN PEDIATRIC CARDIOLOGY	90	8	98	91.8%
BRITISH JOURNAL OF DIABETES AND VASCULAR DISEASE	172	15	187	92.0%
JOURNAL OF HEART VALVE DISEASE	23	2	25	92.0%
ANADOLU KARDIYOLOJI DERGISI	427	29	456	93.6%
CARDIOLOGY JOURNAL	48	3	51	94.1%
KARDIOLOGIA POLSKA	1303	75	1378	94.6%
REVISTA PORTUGUESA DE CARDIOLOGIA	854	48	902	94.7%
MINERVA CARDIOANGIOLOGICA	512	28	540	94.8%
ASIAN CARDIOVASCULAR AND THORACIC ANNALS	953	52	1005	94.8%
OPERATIVE TECHNIQUES IN THORACIC AND CARDIOVASCULAR SURGERY	166	9	175	94.9%
INNOVATIONS TECHNOLOGY AND TECHNIQUES IN CARDIOTHORACIC AND VASCULAR SURGERY	38	2	40	95.0%
GEFASSCHIRURGIE	325	17	342	95.0%
GIORNALE ITALIANO DI CARDIOLOGIA	490	25	515	95.1%
ANNALES DE CARDIOLOGIE ET D'ANGIOLOGIE	403	20	423	95.3%
JORNAL VASCULAR BRASILEIRO	144	7	151	95.4%
BRITISH JOURNAL OF CARDIOLOGY	419	20	439	95.4%
HERZSCHRITTMACHERTHERAPIE UND ELEKTROPHYSIOLOGIE	130	6	136	95.6%
KOREAN CIRCULATION JOURNAL	192	8	200	96.0%
JOURNAL FOR VASCULAR ULTRASOUND	25	1	26	96.2%
JOURNAL OF CLINICAL AND BASIC CARDIOLOGY	104	4	108	96.3%
INTERNATIONAL JOURNAL OF ANGIOLOGY	443	15	458	96.7%
JOURNAL FUR KARDIOLOGIE	243	8	251	96.8%
COR ET VASA	98	3	101	97.0%
VASOMED	80	2	82	97.6%
ARCHIVOS DE CARDIOLOGIA DE MEXICO	334	8	342	97.7%
CURRENT CARDIOVASCULAR RISK REPORTS	56	1	57	98.2%
TURK KARDIYOLOJI DERNEGI ARSIVI	308	4	312	98.7%
COMPUTERS IN CARDIOLOGY	179	2	181	98.9%
APPLIED CARDIOPULMONARY PATHOPHYSIOLOGY	114	1	115	99.1%
NADCISNIENIE TETNICZE	151	1	152	99.3%
INDIAN JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY	248	1	249	99.6%

ACTA CARDIOLOGICA SINICA	311	1	312	99.7%
ZEITSCHRIFT FUR HERZ THORAX UND GEFASSCHIRURGIE	386	1	387	99.7%
CARDIOLOGY REVIEW	627	1	628	99.8%
KARDIOLOGIYA	1342	2	1344	99.9%
RESPIRATION AND CIRCULATION	906	1	907	99.9%
EJVES EXTRA	414	0	414	100.0%
POLSKI PRZEGLAD KARDIOLOGICZNY	342	0	342	100.0%
SANG THROMBOSE VAISSEaux	246	0	246	100.0%
ANGEIOLOGIE	76	0	76	100.0%
FUTURE CARDIOLOGY	46	0	46	100.0%
CLINICAL AND EXPERIMENTAL MEDICAL LETTERS	35	0	35	100.0%
JOURNAL OF TEHRAN UNIVERSITY HEART CENTER	33	0	33	100.0%
JOURNAL OF GERIATRIC CARDIOLOGY	30	0	30	100.0%
DIALOGUES IN CARDIOVASCULAR MEDICINE	28	0	28	100.0%
ITALIAN JOURNAL OF VASCULAR AND ENDOVASCULAR SURGERY	25	0	25	100.0%
CLINICA E INVESTIGACION EN ARTERIOSCLEROSIS	24	0	24	100.0%
ANALES DE PATOLOGIA VASCULAR	20	0	20	100.0%
ARCHIVES DES MALADIES DU COEUR ET DES VAISSEaux PRATIQUE	20	0	20	100.0%
HART BULLETIN	20	0	20	100.0%
HEART AND METABOLISM	20	0	20	100.0%
VASCULAR DISEASE MANAGEMENT	20	0	20	100.0%

Supplemental Figure 1: Yearly Citation in the 10 Years Following Publication for Articles Published in 1997



Supplemental Table 2: Post-hoc analysis of 2002-07 citation for journal articles published in 1997. How well were articles that were poorly cited within the first 5 years cited in the subsequent 5 years?

	Poorly cited 1997-2002	Poorly cited 2003-2007	
		Yes	No
Yes		5903 (91%)	572 (8.8%)
No		1424 (23.4%)	4668 (76.6%)

Supplemental Figure 2: The proportion of very highly cited articles (> 25 citations) among cardiovascular journals. In this figure, we rank the 182 cardiovascular journals by the proportion of poorly cited articles – journal 1 (left) on the x-axis has the least proportion of poorly cited article content and journal 182 (right) has the highest proportion of poorly cited article content.

