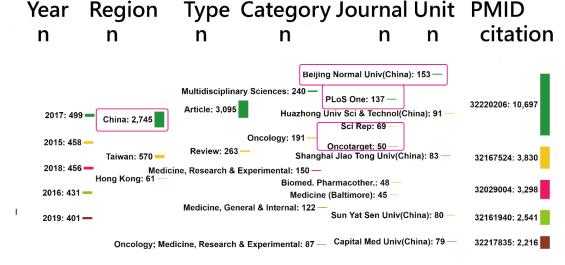
How to conduct this study

A. Descriptive statistics

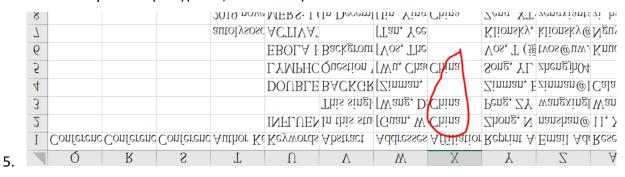
Download data from WoS for articles(or review articles) with >20 citations in terms of (China or Hong Kung or Taiwan) and Emergency since 2013(n=4000)



2. Download citations by year from Pubmed for extracting the most increasing articles in recent four years(n=3376)



4. Fig. China(2745) dominated the field of Emergency authors in publications, followed by Taiwan(570)(n=26,351 in total).



3.

- 6. Fig Articles limited to those corresponding authors who are in China, Hong Kung or Taiwan(n=2994).
- 7. 8.

4	А	В	С	D	Е	F	G	Н
1	137	138			Year	Number of Results	Year	Number of Results
2			15		2016	1		
3			62		2018	1		
4			14		2020	1		
5			11		2021	3		
6			19		2022	0		
7			7					
8			21					
9			12					

Fig. with a VBA module in MS Excel to extract data from Pubmed(Cost much time to get the data in computations)

https://pubmed.ncbi.nlm.nih.gov/?linkname=pubmed_pubmed_citedin&dispmax=50&from_uid=29694958&timeline=expanded

	A	В	С	D	Е	F	G	Н	I	J	K	L	M
1	Pubmed Ic	Total Cita	IP	ipcasee	type	Growth	R0	AAC at IP	IP period	case at ip	1	2	3
2	21606086	20	6	2.3502	3	0	1.08	0.57	1	4	1	3	7
3	22160169	18	6	3.6497	4	-0.56	1.15	0.6	1	12	3	8	14
4	22244603	26	6	1.7536	4	-0.94	1.13	0.62	1	3	1	1	2
5	22580631	9	4	2.0205	4	-0.63	1.15	0.54	1	2	5	9	12
6	22616629	11	2	0.7071	5	0	1	0.5	1	1	1	2	2
7	22648000	15	6	2.4	2	0.4	1.07	0.54	1	3	5	8	11
8	22672284	15	6	1.4	4	-0.4	1.25	0.54	4	1	1	2	2
9	22761513	15	6	2.1	4	-0.6	1.11	0.52	4	1	1	3	6
10	22809811	12	0	0	3	0	0	1	0	1	0	0	0
11	22855181	11	4	1.9745	3	-0.63	1.07	0.57	1	3	4	7	9
12	22895698	9	4	1.9053	4	-0.4	1.11	0.55	1	2	3	6	10

Fig. Growth extracted by citations in recent 4 yearsx

	Α	В	С	D	Е	F	G	Н	I	J	K
1	Pubmed Io	Total Cita	IP	ipcasee	type 🤇	Growth	R 0	AAC at IP	IP period	case at ip	1
2	26045819	73	7	1.676	1	4	1.21	0.53	4	1	0
3	28378417	62	8	1.9236	1	1	1.35	0.58	3	3	0
4	32570087	10	10	1.6412	1	1	1.57	0.67	1	3	0
5	23533308	213	6	2.6	1	0.99	1.13	0.52	5	2	1
6	30034234	32	9	1.92	1	0.99	1.97	0.64	2	4	0
7	31466731	29	9	2.07	1	0.99	1.97	0.69	2	5	0
8	30105614	26	9	1.6933	1	0.98	1.86	0.64	2	3	0
9	31674275	26	9	1.895	1	0.98	1.9	0.67	2	4	0
10	32355211	16	10	1.92	1	0.98	1.73	0.64	1	4	0
11	31780371	38	9	2.5981	1	0.97	2.14	0.75	2	8	0
12	32292348	28	10	2.68	1	0.97	2.03	0.65	1	8	0

Fig 100 top-cited worth reading articles extracted by sorting the growth rate

B. 100 Top recommended articles

Year Region Type Category Journal Unit Author PMID n n n n n citation(%)

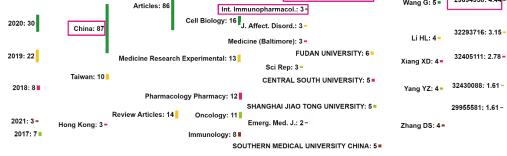
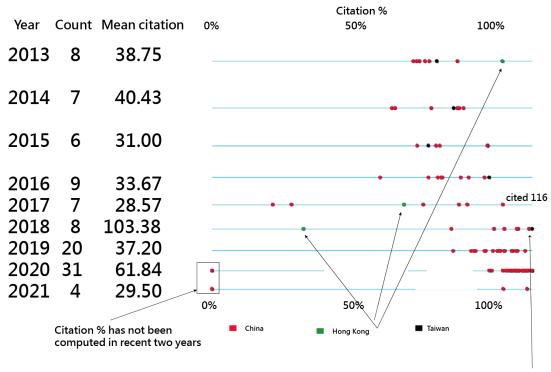


Fig 100 top-cited worth reading articles in variables (n=100)(Corresponding authors=China, Hong Kong, or Taiwan) and growth trend>0.77 of citations in recent 4 years

 Using VBA module to screen article with most increasting citations based on recent four years and strong burst strength(>2.0) (top n=100 as study data)



Wu MY (2018). Current Mechanistic Concepts in Ischemia and Reperfusion Injury 10. (PMID=29694958)

Fig. IBP for T100ER. Data from the website at https://icite.od.nih.gov/analysis#

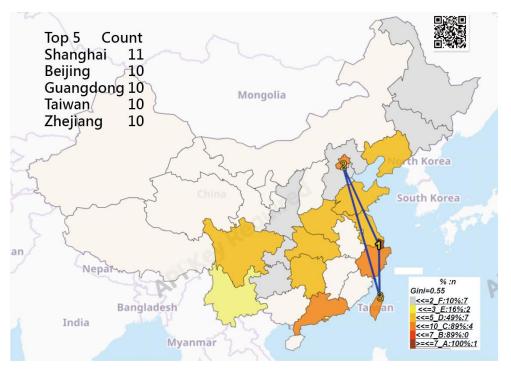


Fig. C

c. Comparison of T100ER articles

Table 1 Top 10 recommended articles

PMID	Author(year)	MeSH	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	1534	Growth
29694958	Wu MY(2018)	pathology	0	0	0	0	0	7	29	57	110	56	259	0.51
32293716	Zhu J(2020)	COVID-19	0	0	0	0	0	0	0	83	119	46	248	0.44
32405111	Tang W(2020)	COVID-19	0	0	0	0	0	0	0	42	162	41	245	0.45
32430088	Liu CY(2020)	psychology	0	0	0	0	0	0	0	45	111	34	190	0.47
29955581	Zhang Z(2018)	Cox proportional hazards	0	0	0	0	0	6	9	24	56	23	118	0.48
32445579	Luo X(2020)	metabolism	0	0	0	0	0	0	0	42	98	24	164	0.40
32871661	An Y(2020)	Betacoronavirus	0	0	0	0	0	0	0	8	51	23	82	0.64
32633729	Han Y(2020)	COVID-19	0	0	0	0	0	0	0	27	68	16	111	0.40
30961662	Zhang Z(2019)	complications	0	0	0	0	0	0	2	17	30	14	63	0.55
30622671	Xiao X(2018)	metabolism	0	0	0	0	0	1	5	13	25	10	54	0.41

В	С	D	Е	F	G	Н	I	J
h	g	Rh	Ah	ci	xk	X	Rx	Ax
1	1	1.41	2	1.898093	29	7.42	7.52	1.95
1	1	1.38	1.9	1.896363	18	5.84	5.84	1.9
1	1	1.39	1.93	1.896998	17	5.68	5.69	1.9
2	2	2.09	2.19	1.901074	16	5.52	5.62	1.97
1	1	1.41	2	1.909226	9	4.15	4.18	1.94
1	1	1.38	1.9	1.896596	9	4.13	4.13	1.9
1	1	1.38	1.9	1.896373	9	4.13	4.13	1.9
1	2	1.48	2.19	1.931743	8	3.93	4	2
1	1	1.39	1.93	1.898093	8	3.9	3.91	1.91
1	1	1.39	1.93	1.896596	8	3.9	3.91	1.91
1	1	1.41	2	1.896998	7	3.64	3.67	1.92
2	2	2.09	2.19	1.909226	6	3.38	3.5	2.05
1	1	1.39	1.93	1.909226	6	3.38	3.39	1.91

To compute the x-index for each entities (Cal.xlsm)



http://www.healthup.org.tw/kpiall/forestplot.asp

Copy and paste the data onto the website to produce the scatter plot below:

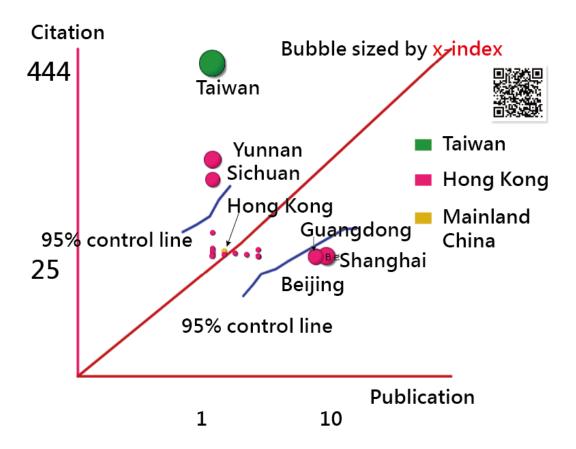


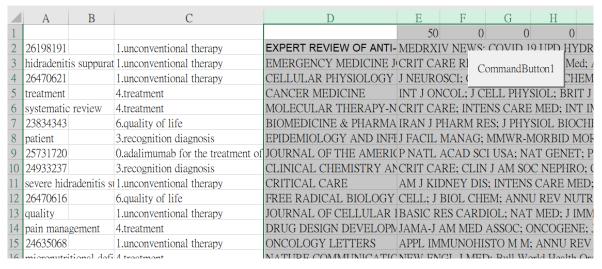
Fig Using scatter plot to display the research performance with x-indexes

Dual map overlays

Step 1: extract data from text file of WOS as path and the file shown below(references of each article were extracted out) using the module of WOScouplingcitedmatchciting500.xlsm:

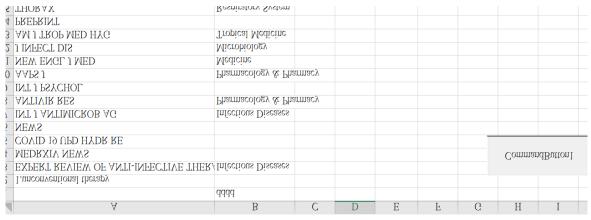
	Α	В	С	D	Е	F	G	Н		1
	D:\WOS\er100\			_	ymatch to journal-category			0	0	•
2	download100				CLINICS	CLIN C	CHEM; BIO	СНЕМ В	IOPH	RES (
3					MEDICINE	THRC	AD HACKAC	CTACI	; J TH	ROM
L					BMJ OPEN	J NUT			AGIN	G MAI
,					CHINESE MEDICAL JOURN	EUR .	text out into	excel	T; Her	matol (
;					MEDICINE	SPRII			Y INT;	OPHT
•					CHINESE MEDICAL JOURN	J AM C	COLL CARE	DIOL; D	RUG T	ODAY
3					YONSEI MEDICAL JOURNA	CELL I	METAB; MO	OL MED	REP;	CELL
)					MEDICINE	GAS1			- '	ANN S
0					JOURNAL OF CLINICAL ME	AM J	D I			d; J El
1					INTERNAL AND EMERGENO	Crit C	Dual	map		SCAN
2					MEDICINE	NEUF			5;	FUNC.
3					CHINESE MEDICAL JOURN				,	
4					MEDICINE		SURG; STA			
5					JOURNAL OF THE CHINESE					
6					MEDICINE		SE MED; CI			
7					TOHOKU JOURNAL OF EXP					
8					CROATIAN MEDICAL JOUR			,		
9					JOURNAL OF INVESTIGATI					
0					CHINESE MEDICAL JOURN					
1					JOURNAL OF THE CHINESE	ONCO	TARGET; N	IAT RE	/ CAN	CER;

Copy the results onto another module of WOScategotymatch.xlsM



To examine subject category of each journal after extracting all journal from the file using pajeklist.xlsm.

e.g. 1043 journals were found in this study.



In this procedure of Sheet4, we examine all journal matched with subject category well.

	А	В	C	D	E		F	G	Н	Ţ	
1	A A	50	0		0	0	0		**		
2	EXPERT REVIEW OF ANTI-	MEDRXI	V NEWS;	COVID	19 UPD	HYDR	RE; NI	EWS; IN	T J ANTIN	MICROB	AG;
3	EMERGENCY MEDICINE J	CRIT CA	RE RES I	PRACT;	Crit Care	Med;	AM J SU	JRG; CR	IT CARE	; ANN IN	TEN
4	CELLULAR PHYSIOLOGY	J NEURO	SCI; CEL	L PHYS	IOL BIO	CHEM	I; Curr F	Ieart Fail	Rep; MO	L CELL 1	NEUF
5	CANCER MEDICINE	INT J ON	COL; J C	ELL PH	YSIOL; E	BRIT J	CANCI	ER; PAT	HOL RES	PRACT;	ONC
5	MOLECULAR THERAPY-N	CRIT CA	RE; INTE	NS CAR	E MED;	INT IN	MMUN(OPHARN	IACOL; J	AM SOC	NEP
7	BIOMEDICINE & PHARMA										
8	EPIDEMIOLOGY AND INF										
9	JOURNAL OF THE AMERIC										
0	CLINICAL CHEMISTRY AN										
. 1	CRITICAL CARE								DD'16: PR		
2	FREE RADICAL BIOLOGY										
.3	JOURNAL OF CELLULAR 1										
4	DRUG DESIGN DEVELOPM										
.5	ONCOLOGY LETTERS	APPL IM									
6	NATURE COMMUNICATION										
7	JOURNAL OF THROMBOSI										
.8	CELL AND TISSUE RESEA	GENE TH	IER; J EN	IDODON	IT; ORAI	L SUR	G ORAI	L MED (O; ORAL S	SURG OR	IAL I

In the worksheet of dd, we copy and paste journals onto the sheet(WOScategorymatch.xlsm).

	A	В	С	D	Е	F
1	dd					
2	General Medicine	CGeneral Medicine	CClincal 1	CClincal	CClincal	CClincal
3	Clincal Medicine/Surger	CGeneral Health/Public	CClincal 1	CClincal	CClincal	CClincal
4	Clincal Medicine/Surger	CClincal Medicine/Sur	CClincal	CClincal	CClincal	[CCell
5	Clincal Medicine/Surger	CClincal Medicine/Sur	CClincal	CClin		al
6	General Health/Public/N	CClincal Medicine/Sur	CClincal	CClin C	ommandBı	atton1 tics
7	General Health/Public/N	CClincal Medicine/Sur	CClincal	CCell —	ССППСШ	hys
8	General Medicine	CClincal Medicine/Sur	CClincal	CGeneral	CGeneral	CClincal
9		CClincal Medicine/Sur	CGenetics	CClincal	CClincal	CClincal
10	General Medicine	CClincal Medicine/Sur	CClincal 1	CGeneral	CClincal	CClincal
11	Climant Madining/Common	CCliman Madining/Com	001:4001	CCI:mas1	1 CC ~11	CCliman!

In dd3 sheet, we transform journals to respective category

D	Е	F	G	Н	I	J	
r cat			lab	1.on			catt
rials Science							Agricu
ral Health/Public/	Nursing		-20.43	-108.86			Agricu
ral Health/Public/	Nursing		-26.6	-120.81	Reset	lab lon	Agricu
ral Health/Public/	Nursing		-40.2	-97.04	TCSCt .		Agrono
ral Health/Public/	Nursing		-54.31	-97.72	6		Astron
rials Science							Audiol
rials Science					To na	ation	Autom
rials Science					10 116	ation	Behavi
ations Research &	Managem	ent Science	e				Biodiv
ations Research &	Managem	ent Science	e		m 1		Biolog
ations Research &	Managem	ent Science	e		To rela	ation	Biophy
ations Research &	Managem	ent Science	e				Cell
ations Research &	Managem	ent Science	e				Chemi
ations Research &	Managem	ent Science	e				Clinca

Using these two macros to generate the pajek file used to draw the dual map $% \left(1\right) =\left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right)$

٠,	GMITOD 1 II	33 20	10 00	0 00		٠,	
13	CJ INFECT DIS	-19.26	3.61	0.02		36	
12	CGeneral Health/Public/Nursing	-30	-10	1		36	
11	CNEW ENGL J MED	-8.21	13.42	0.02		36	
10	CAAPS J	-12.78	-44.71	0.02		34	
9	CINT J PSYCHOL	3.82	-60.57	0.02		34	
8	CANTIVIR RES	32.09	-33.32	0.02		34	
7	CClincal Medicine/Surgery	10	-40	1		34	
6	CANTIVIR RES	32.09	-33.32	0.02		34	
5	CGeneral Medicine	-50	-40	1		37	
4	CINT J ANTIMICROB AG	-71.38	-23.42	0.02		37	
3	General Medicine	-50	-140	1			
2	EXPERT REVIEW OF ANTI-INFECTIVE T	-58.67	-154.3	0.02		7	
1	Nation	Lab	lon	weight		cat	
	A	В	C	D	Е	F	(

	A	В	С	D	Е	F
1		A	В	С		
2		General Health/Public/Nursing	CGeneral	0.9	General Health/Pu	blic/N
3		General Health/Public/Nursing	CBiophys	0.79	General Health/Pu	blic/N
4		General Health/Public/Nursing	CCell	3.71	General Health/Pu	blic/N
5		General Health/Public/Nursing	CGenetics	0.51	General Health/Pu	blic/N
6		General Health/Public/Nursing	CClincal 1	16.64	General Health/Pu	blic/N
7		General Health/Public/Nursing	CGeneral	6.12	General Health/Pu	blic/N
8		General Health/Public/Nursing	CZoology	0.04	General Health/Pu	blic/N
9		General Health/Public/Nursing	CChemist	0.19	General Health/Pu	blic/N
10		General Health/Public/Nursing	CEnginee	0.04	General Health/Pu	blic/N
11		General Health/Public/Nursing	CInformat	0.01	General Health/Pu	blic/N
12		Clincal Medicine/Surgery	CClincal 1	0.29	Clincal Medicine/S	Surger
13		Clincal Medicine/Surgery	CGeneral	0.02	Clincal Medicine/S	Surger
14		Clincal Medicine/Surgery	CCell	0.01	Clincal Medicine/S	Surger
15						
16						

These two formats used to generate the dual map

	A	В	С	D	Е
1	Nation	Lab	lon	63.26	0.00
2	EXPERT REVIEW OF ANTI-INFECTIVE	-58.67	-154.3	0.02	0.04
3	General Medicine	-50	-140	1	0.44
4	CINT J ANTIMICROB AG	-71.38	-23.42	0.09	0.12
5	CGeneral Medicine	-50	-40	1	0.44
6	CANTIVIR RES	32.09	-33.32	0.08	0.11
7	CClincal Medicine/Surgery	10	-40	1	0.44
8	CINT J PSYCHOL	3.82	-60.57	0.02	0.04
O	CAADSI	_10 78	_11 71	0.02	0.04

Notes and their coordinates

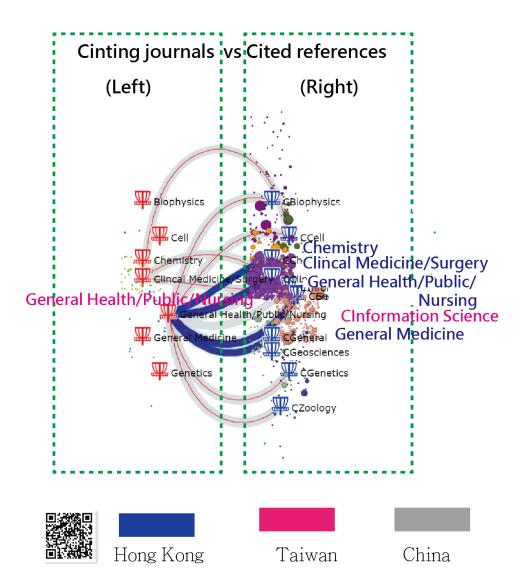
	А	В	С	D	Е	
1	96.61934	1	28.58	С	size	1
2	1	General Health/Public/Nursing	CClincal N	14.74	27.56205	
3	2	General Health/Public/Nursing	CCell	3.36	14.72472	
4	3	General Health/Public/Nursing	CGeneral	5.25	18.32581	
5	4	General Health/Public/Nursing	CGeneral	0.74	1	
6	5	General Health/Public/Nursing	CBiophysi	0.7	1	
7	6	General Health/Public/Nursing	CChemist	0.16	1	
8	7	General Health/Public/Nursing	CGenetics	0.12	1	
9	8	General Health/Public/Nursing	CEngineer	0.04	1	
10	9	General Health/Public/Nursing	CZoology	0.03	1	

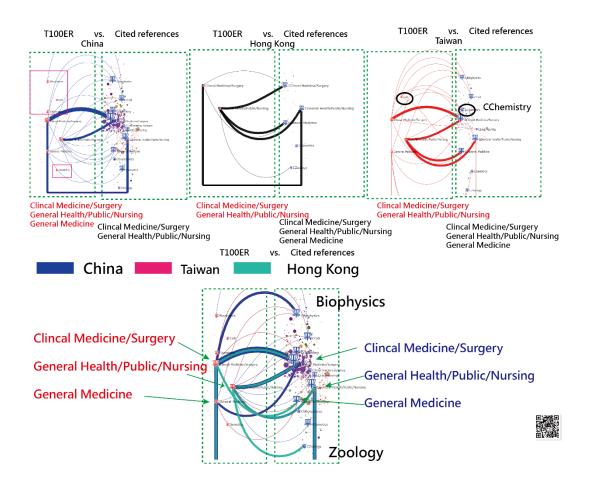
Relations with layers in comparison of differences in journals patterns

	А	В	С	D	Е	F	G	Н	
4	<html xmlns="http://www.w3.org/1999/xhtml"></html>								
5	<head></head>							95%	
6	<meta content="text/html; charset=utf-8" http-equiv="Content-Type"/>								
7	<pre><meta content="text/html; charset=utf-8" http-equiv="Content-Type"/></pre>								
8	<title>PaperABC_GoogleMap</title>								
9	<meta content="width=device-width; initial-scale=1.0" name="viewport"/>								
10									
11	<pre><scgript src="/autoadjust/js/jquery-1.7.1.min.js"></scgript></pre>								
12	<pre><script src="/autoadjust/js/script.js"></script></pre>								
13	<pre><script src="/autoadjust/js/forms.js"></script></pre>								
14	<pre><script src="/autoadjust/js/superfish.js"></script></pre>								
15	<pre><script src="/autoadjust/js/jquery.responsivemenu.js"></script></pre>								
11			11						

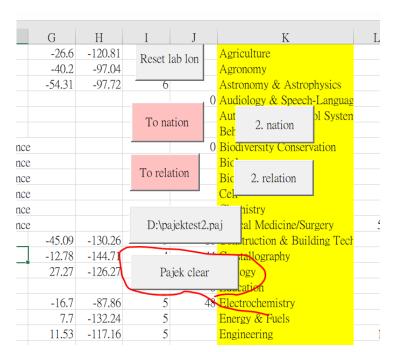
Html codes were generated in MS Excel

Dual maps used to compare cocitation patterns between two entities





]



Producing pajektest2.paj file in D: driver to run pajek as below:

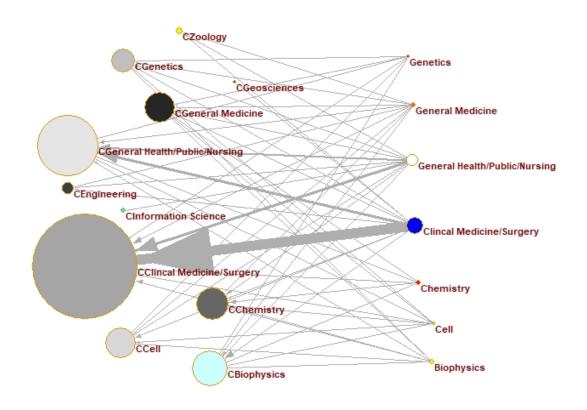




Fig Variables for Top 100 articles

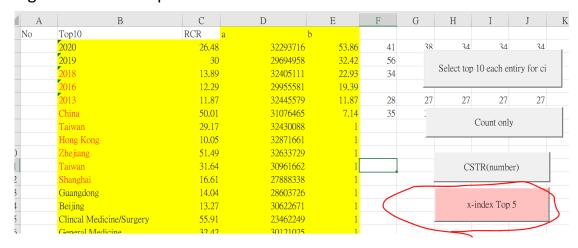


Fig Taking out top 5 with higher x-indexes

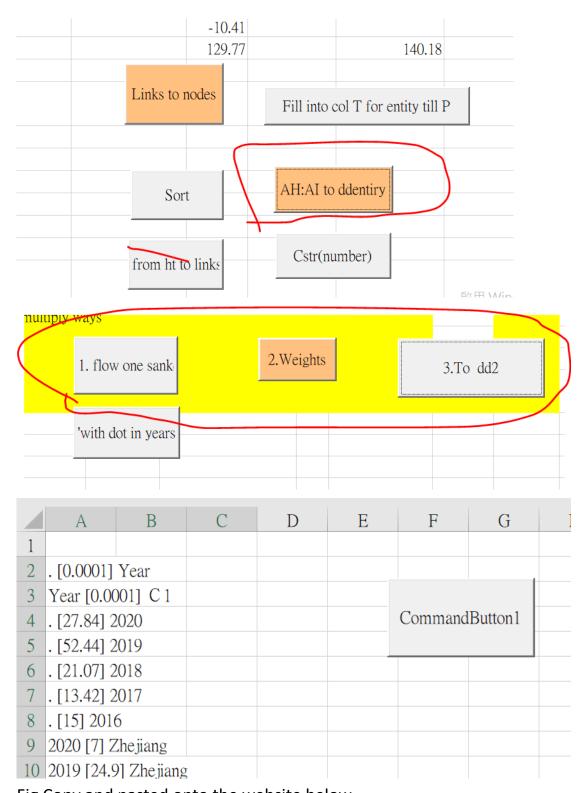
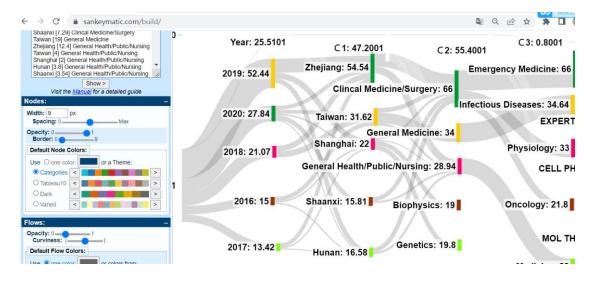


Fig Copy and pasted onto the website below



Variables and top 5 elements by x-index in T100ER articles

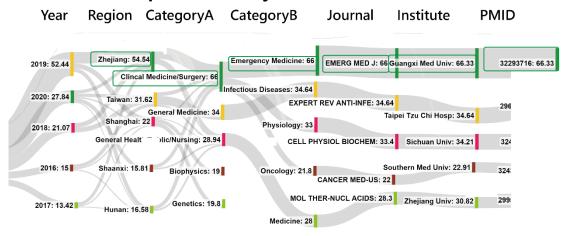


Fig Using the Sankey diagram to display top five elements in variables of T100ER articles that were produced in Adobe Illustration