

Table S1 Detailed search strategy of individual databases

Databases	No.	Search query	Search results
PubMed	#1	Lung Neoplasms[mh] OR NSCLC[tw] OR SCLC[tw]	299,129
	#2	(lung[tw] OR pulmonary[tw]) AND (neoplasm*[tw] OR cancer*[tw] OR tumor[tw] OR tumors[tw] OR tumour*[tw] OR carcinom*[tw] OR adenocarcinom*[tw])	482,714
	#3	#1 OR #2	493,476
	#4	(ErbB Receptors[mh:noexp] OR Protein-Tyrosine Kinases[mh:noexp]) AND Protein Kinase Inhibitors[mh:noexp]	11,881
	#5	tyrosine kinase inhibitor*[tw] OR epidermal growth factor receptor kinase inhibitor*[tw] OR EGF receptor inhibitor*[tw] OR epidermal growth factor receptor inhibitor*[tw] OR EGFR kinase inhibitor*[tw] OR EGFR-TKI[tw] OR EGFR-TKIs[tw] OR EGFR inhibitor*[tw]	45,087
	#6	Gefitinib[mh] OR gefitinib[tw] OR gefitinat[tw] OR iressa[tw] OR zd 1839[tw] OR zd1839[tw]	8,817
	#7	Erlotinib Hydrochloride[mh] OR erlotinib[tw] OR OSI-774[tw] OR OSI774[tw] OR CP 358774[tw] OR CP358774[tw] OR NSC 718781[tw] OR NSC718781[tw] OR R 1415[tw] OR R1415[tw] OR tarceva[tw]	8,547
	#8	Afatinib[mh] OR afatinib[tw] OR BIBW 2992[tw] OR BIBW2992[tw] OR gilotrif[tw] OR giotrif[tw] OR tovok[tw]	2,199
	#9	osimertinib[tw] OR azd 9291[tw] OR azd9291[tw] OR mereletinib[tw] OR tagrisso[tw]	2,904
	#10	dacomitinib[tw] OR pf 00299804[tw] OR pf 299[tw] OR pf 299804[tw] OR pf00299804[tw] OR pf299[tw] OR pf299804[tw] OR vizimpro[tw]	444
	#11	icotinib[tw] OR bpi 2009[tw] OR bpi2009[tw] OR bpi 2009h[tw] OR bpi2009h[tw] OR conmana[tw]	465
	#12	poziotinib[tw] OR hm 781 36b[tw] OR hm781 36b[tw] OR hm 781 36[tw] OR hm781 36[tw] OR nov 120101[tw] OR nov120101[tw]	109
	#13	abivertinib[tw] OR avitinib[tw] OR AC0010[tw] OR canertinib[tw] OR CI-1033[tw] OR CI1033[tw] OR Cetuximab[mh] OR cetuximab[tw] OR erbitux[tw] OR C225[tw] OR depatuzizumab[tw] OR ABT-806[tw] OR disitamab[tw] OR Lapatinib[mh] OR lapatinib[tw] OR tykerb[tw] OR GW 282974X[tw] OR GW-572016[tw] OR laprituximab[tw] OR losatuzizumab[tw] OR lovaxin b[tw] OR mavelertinib[tw] OR nazartinib[tw] OR EGF-816[tw] OR neratinib[tw] OR HKI-272[tw] OR nerlynx[tw] OR olafertinib[tw] OR olmutinib[tw] OR Panitumumab[mh] OR panitumumab[tw] OR ABX-EGF[tw] OR vectibix[tw] OR pertuzumab[tw] OR perjeta[tw] OR RG-1273[tw] OR rhumab-2C4[tw] OR omnitarg[tw] OR rociletinib[tw] OR CO-1686[tw] OR rogaratinib[tw] OR BAY 1163877[tw] OR sapitinib[tw] OR AZD 8931[tw] OR serclutamab[tw] OR tarloxotinib[tw] OR timigutuzumab[tw] OR Trastuzumab[mh] OR trastuzumab[tw] OR herceptin[tw] OR trazimera[tw] OR varlitinib[tw] OR xilertinib[tw] OR zanidatamab[tw]	27,747
	#14	lazertinib[nm] OR lazertinib[tw] OR leclaza[tw] OR JNJ-73841937[tw] OR YH25448[tw]	38
	#15	#4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14	80,931
	#16	((Gastric Acid[mh] OR gastric acid*[tw]) AND (suppressant*[tw] OR suppressing agent*[tw])) OR gastric acid inhibitor*[tw] OR gastric acid secretion inhibitor*[tw]	346
	#17	Proton Pump Inhibitors[mh] OR proton pump inhibitor*[tw] OR PPI[tw] OR PPIs[tw]	47,594
	#18	Lansoprazole[mh:noexp] OR lansoprazol*[tw] OR ogastro[tw] OR AG-1749[tw] OR AG1749[tw] OR agopton[tw] OR bamalite[tw] OR lansol[tw] OR lanzor[tw] OR monoliton[tw] OR opiren[tw] OR prevacid[tw] OR pro ulco[tw] OR promeco[tw] OR takepron[tw] OR ulpax[tw] OR zoton[tw] OR ogast[tw] OR prezal[tw]	3,230
	#19	Esomeprazole[mh] OR esomeprazol*[tw] OR nexium[tw]	2,078
	#20	Omeprazole[mh:noexp] OR omeprazol*[tw] OR prilosec[tw] OR H 168-68[tw] OR H 16868[tw]	13,361
	#21	Dexlansoprazole[mh] OR lansoprazol*[tw] OR R-lansoprazole[tw] OR TAK-390MR[tw] OR TAK390MR[tw] OR TAK-390[tw] OR dexilant[tw] OR T-168390[tw] OR T168390[tw]	3,260
	#22	Pantoprazole[mh] OR pantoprazol*[tw] OR SKF-96022[tw] OR SKF96022[tw] OR "SK and F-96022"[tw] OR "SK and F96022"[tw] OR BY-1023[tw] OR BY1023[tw] OR protonix[tw]	2,451
	#23	Rabeprazole[mh] OR rabeprazol*[tw] OR dexrabeprazole[tw] OR E 3810[tw] OR E3810[tw] OR pariet[tw] OR aciphex[tw] OR LY-307640[tw] OR LY307640[tw]	1,582
	#24	ilaprazole[nm] OR ilaprazol*[tw] OR IY81149[tw] OR IY-81149[tw]	95
	#25	#17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24	57,753
	#26	Histamine H2 Antagonists[mh] OR histamine H2 receptor antagonist*[tw] OR H2 antihistamin*[tw] OR H 2 receptor blocking agent*[tw] OR H2 antagonist*[tw] OR H2 blocker*[tw] OR H2 blocking agent*[tw] OR H2 receptor antagonist*[tw] OR H2 receptor blocker*[tw] OR H2 receptor blocking agent*[tw] OR histamine 2 receptor antagonist*[tw] OR histamine 2 receptor blocker*[tw] OR histamine 2 receptor blocking agent*[tw] OR histamine H 2 receptor antagonist*[tw] OR histamine H2 antagonist*[tw] OR histamine H2 blocker*[tw] OR histamine H2 blocking agent*[tw] OR H2 receptor blockader*[tw] OR histamine H2 receptor blocker*[tw] OR histamine H2 receptor blocking agent*[tw]	13,087
	#27	Ranitidine[mh] OR ranitidin*[tw] OR biotidin[tw] OR ranisen[tw] OR sostril[tw] OR zantac[tw] OR zantic[tw] OR AH-19065[tw] OR AH19065[tw]	7,463
	#28	Famotidine[mh] OR famotidin*[tw] OR YM-11170[tw] OR YM11170[tw] OR pepcid[tw] OR MK-208[tw] OR MK208[tw]	2,523
	#29	Cimetidine[mh] OR cimetidin*[tw] OR biomet[tw] OR histodil[tw] OR "SK and F-92334"[tw] OR "SK and F92334"[tw] OR SKF-92334[tw] OR SKF92334[tw] OR tagamet[tw] OR altramet[tw] OR eureceptor[tw]	13,582
	#30	lafutidine[nm] OR lafutidin*[tw] OR FRG-8813[tw] OR protecadin[tw] OR stogar[tw]	124
	#31	roxatidine acetate[nm] OR roxatidin*[tw] OR roxin[tw] OR roxit[tw] OR HOE-062[tw]	193
	#32	Nizatidine[mh] OR nizatidin*[tw] OR LY-139037[tw] OR LY139037[tw] OR axid[tw]	465
	#33	lavoltidin*[tw] OR AH-23844[tw] OR AH23844[tw] OR loxtidin*[tw]	66
	#34	niperotidine[nm] OR niperotidin*[tw]	3
	#35	#26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34	27,815
	#36	#3 AND #15 AND (#16 OR #25 OR #35)	75
	#37	Survival Analysis[mh] OR Survival Rate[mh] OR survival*[tw]	1,598,803
	#38	#3 AND #16 OR #25 OR #35) AND #37	428
	#39	(Animals[mh] NOT Humans[mh]) OR Models, Animal[mh:noexp] OR Disease Models, Animal[mh] OR Animal Experimentation[mh]	5,400,648
	#40	#36 NOT #39 AND English[la]	74
	#41	#38 NOT #39 AND English[la]	411
	#42	#40 AND preprint[pt]	0
	#43	#41 AND preprint[pt]	1

Table S1 (continued)

Table S1 (continued)

Databases	No.	Search query	Search results
Embase	#1	('lung tumor'/exp OR (NSCLC OR SCLC):ti,ab,kw)	576,162
	#2	(lung OR pulmonary):ti,ab,kw AND (neoplasm* OR cancer* OR tumor OR tumors OR tumour* OR carcinom* OR adenocarcinom*):ti,ab,kw	593,517
	#3	#1 OR #2	754,289
	#4	('epidermal growth factor receptor'/de 'protein kinase inhibitor'/de OR 'protein tyrosine kinase'/de OR 'epidermal growth factor receptor kinase inhibitor'/de)	78,282
	#5	('tyrosine kinase inhibitor*':ti,ab,kw OR (('epidermal growth factor receptor' OR EGF OR EGFR) NEAR/4 (inhibitor* OR TKI OR TKIs)):ti,ab,kw)	80,546
	#6	gefitinib/de OR (gefitinib OR gefitinat OR iressa OR zd-1839 OR zd1839):ti,ab,kw	30,839
	#7	erlotinib/de OR (erlotinib OR OSI-774 OR OSI774 OR CP-358774 OR CP358774 OR NSC-718781 OR NSC718781 OR R-1415 OR R1415 OR tarceva):ti,ab,kw	33,925
	#8	afatinib/de OR (afatinib OR BIBW-2992 OR BIBW2992 OR gliotrif OR giotrif OR tovok):ti,ab,kw	9,094
	#9	osimertinib/de OR (osimertinib OR azd-9291 OR azd9291 OR mereletinib OR tagrisso):ti,ab,kw	8,611
	#10	icotinib/de OR (icotinib OR bpi-2009 OR bpi2009 OR bpi-2009h OR bpi2009h OR conmana):ti,ab,kw	1,441
	#11	dacomitinib/de OR (dacomitinib OR pf-00299804 OR pf-299 OR pf-299804 OR pf00299804 OR pf299 OR pf299804 OR vizimpro):ti,ab,kw	2,026
	#12	poziotinib/de OR (poziotinib OR hm-781-36b OR hm781-36b OR hm-781-36 OR hm781-36 OR nov-120101 OR nov120101):ti,ab,kw	445
	#13	abivertinib/de OR canertinib/de OR cetuximab/de OR dacomitinib/de OR depatuxizumab/de OR disitamab/de OR lapatinib/de OR laprituximab/de OR losatuxizumab/de OR 'lovaxin b'/de OR mavelertinib/de OR nazartinib/de OR neratinib/de OR olafertinib/de OR olmutinib/de OR panitumumab/de OR pertuzumab/de OR rociletinib/de OR rogaratinib/de OR sapitinib/de OR serclutamab/de OR tarloxotinib/de OR timigutuzumab/de OR trastuzumab/de OR varlitinib/de OR xilertinib/de OR zanidatamab/de OR (abivertinib OR avitinib OR AC0010 OR canertinib OR Ci-1033 OR CI1033 OR cetuximab OR erbitux OR C225 OR depatuxizumab OR ABT-806 OR disitamab OR lapatinib OR tykerb OR GW-282974X OR GW-572016 OR laprituximab OR losatuxizumab OR 'lovaxin b' OR mavelertinib OR nazartinib OR EGF-816 OR neratinib OR HKI-272 OR nerlynx OR olafertinib OR olmutinib OR panitumumab OR ABX-EGF OR vectibix OR pertuzumab OR perjeta OR RG-1273 OR rhumab-2C4 OR omnitarg OR rociletinib OR CO-1686 OR rogaratinib OR BAY-1163877 OR sapitinib OR AZD-8931 OR serclutamab OR tarloxotinib OR timigutuzumab OR trastuzumab OR herceptin OR trazimera OR varlitinib OR xilertinib OR zanidatamab):ti,ab,kw	94,648
	#14	lazertinib/de OR (lazertinib OR leclaza OR JNJ-73841937 OR YH25448):ti,ab,kw	196
	#15	#4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14	248,225
	#16	('stomach secretion inhibitor'/de OR ('gastric acid*' NEXT/2 (suppressant* OR 'suppressing agent*' OR inhibitor*)):ti,ab,kw)	2,393
	#17	('proton pump inhibitor'/de OR ('proton pump inhibitor*' OR PPI OR PPIs):ti,ab,kw)	90,972
	#18	lansoprazole/de OR (lansoprazol* OR ogastro OR AG-1749 OR AG1749 OR agopton OR bamalite OR lansol OR lanzor OR monolithum OR opiren OR prevacid OR 'pro ulco' OR promeco OR takepron OR ulpax OR zoton OR ogast OR prezal):ti,ab,kw	13,346
	#19	esomeprazole/de OR (esomeprazol* OR nexium):ti,ab,kw	10,909
	#20	omeprazole/de OR (omeprazol* OR prilosec OR 'H 168-68' OR 'H 16868'):ti,ab,kw	39,872
	#21	dexlansoprazole/de OR (lansoprazol* OR R-lansoprazole OR TAK-390MR OR TAK390MR OR TAK-390 OR dexilant OR T-168390 OR T168390):ti,ab,kw	4,768
	#22	pantoprazole/de OR (pantoprazol* OR SKF-96022 OR SKF96022 OR 'SK and F-96022' OR 'SK and F96022' OR BY-1023 OR BY1023 OR protonix):ti,ab,kw	14,939
	#23	rabeprazole/de OR (rabeprazol* OR dexrabeprazole OR 'E 3810' OR E3810 OR pariet OR aciphex OR LY-307640 OR LY307640):ti,ab,kw	6,686
	#24	ilaprazole/de OR (ilaprazol* OR IY81149 OR IY-81149):ti,ab,kw	270
	#25	#17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24	136,144
	#26	('histamine H2 receptor antagonist'/de OR ((H2 OR 'H 2' OR 'histamine 2') NEXT/2 (antagonist* OR block*)):ti,ab,kw OR 'H2 antihistamin*':ti,ab,kw)	28,543
	#27	ranitidine/de OR (ranitidin* OR biotidin OR ranisen OR sostril OR zantac OR zantic OR AH-19065 OR AH19065):ti,ab,kw	28,553
	#28	famotidine/de OR (famotidin* OR YM-11170 OR YM11170 OR pepcid OR MK-208 OR MK208):ti,ab,kw	10,993
	#29	cimetidine/de OR (cimetidin* OR biomet OR histodil OR 'SK and F-92334' OR 'SK and F92334' OR SKF-92334 OR SKF92334 OR tagamet OR altramet OR eureceptor):ti,ab,kw	35,358
	#30	lafutidine/de OR (lafutidin* OR FRG-8813 OR protecadin OR stogar):ti,ab,kw	348
	#31	roxatidine/de OR ('roxatidine acetate'/de OR (roxatidin* OR roxin OR roxit OR HOE-062):ti,ab,kw)	705
	#32	nizatidine/de OR (nizatidin* OR LY-139037 OR LY139037 OR acid):ti,ab,kw	2,335
	#33	lavoltidine/de OR (lavoltidin* OR AH-23844 OR AH23844 OR loxtidin*):ti,ab,kw	130
	#34	niperotidine/de OR niperotidin*':ti,ab,kw	23
	#35	#26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34	79,839
	#36	#3 AND #15 AND (#16 OR #25 OR #35)	524
	#37	(animal/exp NOT human/exp) OR 'animal model'/exp OR 'animal experiment'/exp	6,912,206
	#38	#36 NOT #37 AND [english]/lim	489
	#39	#38 AND ('conference abstract'/it OR 'conference paper'/it OR 'conference review'/it)	69
	#40	#38 NOT #39	420
	#41	survival/exp OR survival*':ti,ab,kw	2,173,367
	#42	#3 AND (#16 OR #25 OR #35) AND #41	1,197
	#43	#42 NOT #37 AND [english]/lim	1,120
	#44	#43 AND ('conference abstract'/it OR 'conference paper'/it OR 'conference review'/it)	138
	#45	#43 NOT #44	982

Table S1 (continued)

Table S1 (continued)

Databases	No.	Search query	Search results
Cochrane Library	#1	[mh "Lung Neoplasms"] OR (NSCLC OR SCLC):ti,ab,kw	20,007
	#2	(lung OR pulmonary):ti,ab,kw AND (neoplasm* OR cancer* OR tumor OR tumors OR tumour* OR carcinom* OR adenocarcinom*):ti,ab,kw	36,623
	#3	#1 OR #2	37,230
	#4	[mh ^"ErbB Receptors"] OR [mh ^"Protein Kinase Inhibitors"] OR [mh ^"Protein-Tyrosine Kinases"]	2,541
	#5	("tyrosine kinase" NEXT inhibitor):ti,ab,kw OR (("epidermal growth factor receptor" OR EGF OR EGFR) NEAR/4 (inhibitor* OR TKI OR TKIs)):ti,ab,kw	4,141
	#6	[mh Gefitinib] OR (gefitinib OR gefitinat OR iressa OR zd-1839 OR zd1839):ti,ab,kw	1,201
	#7	[mh "Erlotinib Hydrochloride"] OR (erlotinib OR OSI-774 OR OSI774 OR CP-358774 OR CP358774 OR NSC-718781 OR NSC718781 OR R-1415 OR R1415 OR tarceva):ti,ab,kw	1,835
	#8	[mh Afatinib] OR (afatinib OR BIBW-2992 OR BIBW2992 OR gilotrif OR giotrif OR tovok):ti,ab,kw	481
	#9	(osimertinib OR azd-9291 OR azd9291 OR mereletinib OR tagrisso):ti,ab,kw	452
	#10	(icotinib OR bpi-2009 OR bpi2009 OR bpi-2009h OR bpi2009h OR conmana):ti,ab,kw	140
	#11	(dacomitinib OR pf-00299804 OR pf-299 OR pf-299804 OR pf00299804 OR pf299 OR pf299804 OR vizimpro):ti,ab,kw	108
	#12	(poziotinib OR "hm-781-36b" OR "hm781-36b" OR "hm-781-36" OR "hm781-36" OR "nov-120101" OR nov120101):ti,ab,kw	11
	#13	[mh Cetuximab] OR [mh Lapatinib] OR [mh Panitumumab] OR [mh Trastuzumab] OR (abivertinib OR avitinib OR AC0010 OR canertinib OR CI-1033 OR CI1033 OR cetuximab OR erbitux OR C225 OR depatuxizumab OR ABT-806 OR disitamab OR lapatinib OR tykerb OR GW-282974X OR GW-572016 OR laprituximab OR losatuxizumab OR "lovaxin b" OR mavelertinib OR nazartinib OR EGF-816 OR neratinib OR HKI-272 OR nerlynx OR olafertinib OR olmutinib OR panitumumab OR ABX-EGF OR vectibix OR pertuzumab OR perjeta OR RG-1273 OR rhumab-2C4 OR omnitarg OR rociletinib OR CO-1686 OR rogaratinib OR BAY-1163877 OR sapitinib OR AZD-8931 OR serclutamab OR tarloxotinib OR timigutuzumab OR trastuzumab OR herceptin OR trazimera OR varlitinib OR xilertinib OR zanidatamab):ti,ab,kw	7,348
	#14	(lazertinib OR leclaza OR JNJ-73841937 OR YH25448):ti,ab,kw	44
	#15	{OR #4-#14}	14,359
	#16	([mh "Gastric Acid"] OR (gastric NEXT acid):ti,ab,kw) AND (suppressant* OR (suppressing NEXT agent*) OR inhibitor*):ti,ab,kw	905
	#17	[mh "Proton Pump Inhibitors"] OR ("proton pump" NEXT inhibitor):ti,ab,kw OR (PPI OR PPIs):ti,ab,kw	6,279
	#18	[mh ^Lansoprazole] OR (lansoprazol* OR agastro OR AG-1749 OR AG1749 OR agopton OR bamalite OR lansol OR lanzor OR monolium OR opiren OR prevacid OR "pro ulco" OR promeco OR takepron OR ulpax OR zoton OR ogast OR prezal):ti,ab,kw	1,698
	#19	[mh Esomeprazole] OR (esomeprazol* OR nexium):ti,ab,kw	1,852
	#20	[mh ^Omeprazole] OR (omeprazol* OR prilosec OR "H 168-68" OR "H 16868"):ti,ab,kw	4,790
	#21	[mh Dexlansoprazole] OR (lansoprazol* OR R-lansoprazole OR TAK-390MR OR TAK390MR OR TAK-390 OR dexilant OR T-168390 OR T168390):ti,ab,kw	1,699
	#22	[mh Pantoprazole] OR (pantoprazol* OR SKF-96022 OR SKF96022 OR "SK and F-96022" OR "SK and F96022" OR BY-1023 OR BY1023 OR protonix):ti,ab,kw	1,454
	#23	[mh Rabeprazole] OR (rabeprazol* OR dexrabeprazole OR "E 3810" OR E3810 OR pariet OR aciphex OR LY-307640 OR LY307640):ti,ab,kw	1,178
	#24	(ilaprazol* OR IY81149 OR IY-81149):ti,ab,kw	87
	#25	{OR #17-#24}	12,137
	#26	[mh "Histamine H2 Antagonists"] OR ((H2 OR "H 2" OR "histamine 2") NEXT/2 (antagonist* OR block*)):ti,ab,kw OR (H2 NEXT antihistamin*):ti,ab,kw	2,551
	#27	[mh Ranitidine] OR (ranitidin* OR biotidin OR ranisen OR sostril OR zantac OR zantic OR AH-19065 OR AH19065):ti,ab,kw	3,217
	#28	[mh Famotidine] OR (famotidin* OR YM-11170 OR YM11170 OR pepcid OR MK-208 OR MK208):ti,ab,kw	1,012
	#29	[mh Cimetidine] OR (cimetidin* OR biomet OR histodil OR "SK and F-92334" OR "SK and F92334" OR SKF-92334 OR SKF92334 OR tagamet OR altramet OR eureceptor):ti,ab,kw	2,852
	#30	(lafutidin* OR FRG-8813 OR protecadin OR stogar):ti,ab,kw	81
	#31	(roxatidin* OR roxin OR roxit OR HOE-062):ti,ab,kw	99
	#32	[mh Nizatidine] OR (nizatidin* OR LY-139037 OR LY139037 OR acid):ti,ab,kw	230
	#33	(lavoltidin* OR AH-23844 OR AH23844 OR loxtidin):ti,ab,kw	2
	#34	niperotidin*:ti,ab,kw	1
	#35	{OR #26-#34}	7,350
	#36	#3 AND #15 AND (#16 OR #25 OR #35)	26
	#37	[mh "Survival Analysis"] OR [mh "Survival Rate"] OR survival*:ti,ab,kw	139,455
	#38	#3 AND (#16 OR #25 OR #35) AND #37	45

Table S1 (continued)

Table S1 (continued)

Databases	No.	Search query	Search results
Web of Science	#1	TS=(NSCLC OR SCLC)	93,581
	#2	TS=(lung OR pulmonary) AND TS=(neoplasm* OR cancer* OR tumor OR tumors OR tumour* OR carcinom* OR adenocarcinom*)	535,675
	#3	#1 OR #2	549,922
	#4	TS="tyrosine kinase inhibitor*" OR TS=("epidermal growth factor receptor" OR EGF OR EGFR) NEAR/3 (inhibitor* OR TKI OR TKIs)	61,107
	#5	TS=(gefitinib OR gefitinat OR iressa OR zd-1839 OR zd1839)	17,445
	#6	TS=(erlotinib OR OSI-774 OR OSI774 OR CP-358774 OR CP358774 OR NSC-718781 OR NSC718781 OR R-1415 OR R1415 OR tarceva)	13,871
	#7	TS=(afatinib OR BIBW-2992 OR BIBW2992 OR gilotrif OR giotrif OR tovok)	3,430
	#8	TS=(osimertinib OR azd-9291 OR azd9291 OR mereletinib OR tagrisso)	4,691
	#9	TS=(icotinib OR bpi-2009 OR bpi2009 OR bpi-2009h OR bpi2009h OR conmana)	512
	#10	TS=(dacomitinib OR pf-00299804 OR pf-299 OR pf-299804 OR pf00299804 OR pf299 OR pf299804 OR vizimpro)	560
	#11	TS=(poziotinib OR hm-781-36b OR hm781-36b OR hm-781-36 OR hm781-36 OR nov-120101 OR nov120101)	156
	#12	TS=(abivertinib OR avitinib OR AC0010 OR canertinib OR CI-1033 OR CI1033 OR cetuximab OR erbitux OR C225 OR depatuxizumab OR ABT-806 OR disitamab OR lapatinib OR tykerb OR GW-282974X OR GW-572016 OR laprituximab OR losatuxizumab OR "lovaxin b" OR mavelertinib OR nazartinib OR EGF-816 OR neratinib OR HKI-272 OR nerlynx OR olafertinib OR olmutinib OR panitumumab OR ABX-EGF OR vectibix OR pertuzumab OR perjeta OR RG-1273 OR rhumab-2C4 OR omnitarg OR rociletinib OR CO-1686 OR rogaratinib OR BAY-1163877 OR sapitinib OR AZD-8931 OR serclutamab OR tarloxotinib OR timigutuzumab OR trastuzumab OR herceptin OR trazimera OR varlitinib OR xilertinib OR zanidatamab)	45,058
	#13	TS=(lazertinib OR leclaza OR JNJ-73841937 OR YH25448)	80
	#14	#4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13	116,433
	#15	TS=("gastric acid*" NEAR/1 (suppressant* OR "suppressing agent*" OR inhibitor*))	532
	#16	TS=("proton pump inhibitor*" OR PPI OR PPIs)	52,554
	#17	TS=(lansoprazol* OR ogastro OR AG-1749 OR AG1749 OR agopton OR bamalite OR lansol OR lanzor OR monolium OR opiren OR prevacid OR "pro ulco" OR promeco OR takepron OR ulpax OR zoton OR ogast OR prezal)	4,477
	#18	TS=(esomeprazol* OR nexium)	3,223
	#19	TS=(omeprazol* OR prilosec OR "H 168-68" OR "H 16868")	16,047
	#20	TS=(lansoprazol* OR R-lansoprazole OR TAK-390MR OR TAK390MR OR TAK-390 OR dexilant OR T-168390 OR T168390)	4,475
	#21	TS=(pantoprazol* OR SKF-96022 OR SKF96022 OR "SK and F-96022" OR "SK and F96022" OR BY-1023 OR BY1023 OR protonix)	3,355
	#22	TS=(rabeprazol* OR dexrabeprazole OR "E 3810" OR E3810 OR pariet OR aciphex OR LY-307640 OR LY307640)	2,130
	#23	TS=(ilaprazol* OR IY81149 OR IY-81149)	126
	#24	#16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23	66,965
	#25	TS=((H2 OR "H 2" OR "histamine 2") NEAR/1 (antagonist* OR block*)) OR TS="H2 antihistamin"	8,609
	#26	TS=(ranitidin* OR biotidin OR ranisen OR sostril OR zantac OR zantic OR AH-19065 OR AH19065)	9,085
	#27	TS=(famotidin* OR YM-11170 OR YM11170 OR pepcid OR MK-208 OR MK208)	2,830
	#28	TS=(cimetidin* OR biomet OR histodil OR "SK and F-92334" OR "SK and F92334" OR SKF-92334 OR SKF92334 OR tagamet OR altramet OR eureceptor)	12,149
	#29	TS=(lafutidin* OR FRG-8813 OR protecadin OR stogar)	161
	#30	TS=(roxatidin* OR roxin OR roxit OR HOE-062)	211
	#31	TS=(nizatidin* OR LY-139037 OR LY139037 OR axid)	639
	#32	TS=(lavoltidin* OR AH-23844 OR AH23844 OR loxtidin*)	54
	#33	TS=niperotidin*	8
	#34	#25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33	26,526
	#35	#3 AND #14 AND (#15 OR #24 OR #34)	100
	#36	TS=survival*	1,570,439
	#37	#3 AND (#15 OR #24 OR #34) AND #36	494

Table S1 (continued)

Table S1 (continued)

Databases	No.	Search query	Search results
Scopus	#1	TITLE-ABS-KEY(NSCLC OR SCLC)	79,996
	#2	TITLE-ABS-KEY(lung OR pulmonary) AND TITLE-ABS-KEY(neoplasm* OR cancer* OR tumor OR tumors OR tumour* OR carcinom* OR adenocarcinom*)	737,148
	#3	#1 OR #2	740,177
	#4	TITLE-ABS-KEY("tyrosine kinase inhibitor*" OR TITLE-ABS-KEY(("epidermal growth factor receptor" OR EGF OR EGFR) W/3 (inhibitor* OR TKI OR TKIs))	72,777
	#5	TITLE-ABS-KEY(gefitinib OR gefitinat OR iressa OR zd-1839 OR zd1839)	26,661
	#6	TITLE-ABS-KEY(erlotinib OR OSI-774 OR OSI774 OR CP-358774 OR CP358774 OR NSC-718781 OR NSC718781 OR R-1415 OR R1415 OR tarceva)	27,823
	#7	TITLE-ABS-KEY(afatinib OR BIBW-2992 OR BIBW2992 OR gilotrif OR giotrif OR tovok)	6,966
	#8	TITLE-ABS-KEY(osimertinib OR azd-9291 OR azd9291 OR mereletinib OR tagrisso)	6,186
	#9	TITLE-ABS-KEY(icotinib OR bpi-2009 OR bpi2009 OR bpi-2009h OR bpi2009h OR conmana)	1,219
	#10	TITLE-ABS-KEY(dacomitinib OR pf-00299804 OR pf-299 OR pf-299804 OR pf00299804 OR pf299 OR pf299804 OR vizimpro)	1,651
	#11	TITLE-ABS-KEY(poziotinib OR hm-781-36b OR hm781-36b OR hm-781-36 OR hm781-36 OR nov-120101 OR nov120101)	324
	#12	TITLE-ABS-KEY(abivertinib OR avitinib OR AC0010 OR canertinib OR CI-1033 OR CI1033 OR cetuximab OR erbitux OR C225 OR depatuxizumab OR ABT-806 OR disitamab OR lapatinib OR tykerb OR GW-282974X OR GW-572016 OR laprituximab OR losatuxizumab OR "lovaxin b" OR mavelertinib OR nazartinib OR EGF-816 OR neratinib OR HKI-272 OR nerlynx OR olafertinib OR olmutinib OR panitumumab OR ABX-EGF OR vectibix OR pertuzumab OR perjeta OR RG-1273 OR rhumab-2C4 OR omnitarg OR rociletinib OR CO-1686 OR rogaratinib OR BAY-1163877 OR sapitinib OR AZD-8931 OR serclutamab OR tarloxotinib OR timigutuzumab OR trastuzumab OR herceptin OR trazimera OR varlitinib OR xilertinib OR zanidatamab)	74,024
	#13	TITLE-ABS-KEY(lazertinib OR leclaza OR JNJ-73841937 OR YH25448)	140
	#14	#4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13	155,259
	#15	TITLE-ABS-KEY("gastric acid*" PRE/1 (suppressant* OR "suppressing agent*" OR inhibitor*))	374
	#16	TITLE-ABS-KEY("proton pump inhibitor*" OR PPI OR PPIs)	82,543
	#17	TITLE-ABS-KEY(lansoprazol* OR ogastro OR AG-1749 OR AG1749 OR agopton OR bamalite OR lansol OR lanzor OR monolitus OR opiren OR prevacid OR "pro ulco" OR promeco OR takepron OR ulpax OR zoton OR ogast OR prezal)	12,398
	#18	TITLE-ABS-KEY(esomeprazol* OR nexium)	9,326
	#19	TITLE-ABS-KEY(omeprazol* OR prilosec OR "H 168-68" OR "H 16868")	38,219
	#20	TITLE-ABS-KEY(lansoprazol* OR R-lansoprazole OR TAK-390MR OR TAK390MR OR TAK-390 OR dexilant OR T-168390 OR T168390)	12,397
	#21	TITLE-ABS-KEY(pantoprazol* OR SKF-96022 OR SKF96022 OR "SK and F-96022" OR "SK and F96022" OR BY-1023 OR BY1023 OR protonix)	12,446
	#22	TITLE-ABS-KEY(rabeprazol* OR dexrabeprazole OR "E 3810" OR E3810 OR pariet OR aciphex OR LY-307640 OR LY307640)	5,996
	#23	TITLE-ABS-KEY(ilaprazol* OR IY81149 OR IY-81149)	261
	#24	#16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23	122,732
	#25	TITLE-ABS-KEY((H2 OR "H 2" OR "histamine 2") PRE/1 (antagonist* OR block*)) OR TITLE-ABS-KEY("H2 antihistamin*")	28,288
	#26	TITLE-ABS-KEY(ranitidin* OR biotidin OR ranisen OR sostril OR zantac OR zantic OR AH-19065 OR AH19065)	27,640
	#27	TITLE-ABS-KEY(famotidin* OR YM-11170 OR YM11170 OR pepcid OR MK-208 OR MK208)	10,221
	#28	TITLE-ABS-KEY(cimetidin* OR biomet OR histodil OR "SK and F-92334" OR "SK and F92334" OR SKF-92334 OR SKF92334 OR tagamet OR altramet OR eureceptor)	35,751
	#29	TITLE-ABS-KEY(lafutidin* OR FRG-8813 OR protecadin OR stogar)	320
	#30	TITLE-ABS-KEY(roxatidin* OR roxin OR roxit OR HOE-062)	734
	#31	TITLE-ABS-KEY(nizatidin* OR LY-139037 OR LY139037 OR axid)	2,351
	#32	TITLE-ABS-KEY(lavoltidin* OR AH-23844 OR AH23844 OR loxtidin*)	129
	#33	TITLE-ABS-KEY(niperotidin*)	23
	#34	#25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33	77,404
	#35	#3 AND #14 AND (#15 OR #24 OR #34)	508
	#36	TITLE-ABS-KEY(survival*)	2,145,778
	#37	#3 AND (#15 OR #24 OR #34) AND #36	1,332
KoreaMed	#1	NSCLC OR SCLC	769
	#2	(lung OR pulmonary) AND (neoplasm OR neoplasms OR cancer OR cancers OR tumor OR tumors OR tumour OR tumours OR carcinoma OR carcinomas OR adenocarcinoma OR adenocarcinomas)	7,314
	#3	#1 OR #2	7,317
	#4	"tyrosine kinase inhibitor" OR "epidermal growth factor receptor kinase inhibitor" OR "EGF receptor inhibitor" OR "epidermal growth factor receptor inhibitor" OR "EGFR kinase inhibitor" OR EGFR-TKI OR EGFR-TKIs OR "EGFR inhibitor" OR gefitinib OR erlotinib OR afatinib OR osimertinib OR dacomitinib OR icotinib OR poziotinib OR abivertinib OR lazertinib	484
	#5	#3 AND #4	236
	#6	NSCLC OR SCLC OR lung OR pulmonary	
	#7	"gastric acid" AND (inhibitor OR suppressant OR "suppressing agent")	33
	#8	"proton pump inhibitor" OR PPI OR PPIs OR lansoprazol OR lansoprazole OR esomeprazol OR esomeprazole OR omeprazol OR omeprazole OR lansoprazol OR lansoprazole OR pantoprazol OR pantoprazole OR rabeprazol OR rabeprazole OR ilaprazol OR ilaprazole	1,269
	#9	(H2 OR "H 2" OR "histamine 2") AND (antagonist OR blocker OR "blocking agent")	171
	#10	ranitidin OR ranitidine OR famotidin OR famotidine OR cimetidin OR cimetidine OR lafutidin OR lafutidine OR roxatidin OR roxatidine OR nizatidin OR nizatidine OR lavoltidin OR lavoltidine OR niperotidin OR niperotidine	155
	#11	#6 AND (#7 OR #8 OR #9 OR #10)	45
	#12	#5 AND #11	0

Table S1 (continued)

Table S1 (continued)

Databases	No.	Search query	Search results
Preprint (Scopus)	#1	Copy and paste the following content into the advanced document search and conduct the search	
	#2	(TITLE-ABS-KEY(survival*)) AND ((TITLE-ABS-KEY(lung OR pulmonary) AND TITLE-ABS-KEY(neoplasm* OR cancer* OR tumor OR tumors OR tumour* OR carcinom* OR adenocarcinom*)) OR (TITLE-ABS-KEY(NSCLC OR SCLC))) AND ((TITLE-ABS-KEY("gastric acid*" PRE/1 (suppressant* OR "suppressing agent*" OR inhibitor*)) OR ((TITLE-ABS-KEY("proton pump inhibitor*" OR PPI OR PPIs)) OR (TITLE-ABS-KEY(lansoprazol* OR ogastro OR AG-1749 OR AG1749 OR agopton OR bamalite OR lansol OR lanzor OR monolium OR opiren OR prevacid OR "pro ulco" OR promeco OR takepron OR ulpax OR zoton OR ogast OR prezal)) OR (TITLE-ABS-KEY(esomeprazol* OR nexium)) OR (TITLE-ABS-KEY(omeprazol* OR prilosec OR "H 168-68" OR "H 16868")) OR (TITLE-ABS-KEY(lansoprazol* OR R-lansoprazole OR TAK-390MR OR TAK390MR OR TAK-390 OR dexilant OR T-168390 OR T168390)) OR (TITLE-ABS-KEY(pantoprazol* OR SKF-96022 OR SKF96022 OR "SK and F-96022" OR "SK and F96022" OR BY-1023 OR BY1023 OR protonix)) OR (TITLE-ABS-KEY(rabeprazol* OR dexrabeprazole OR "E 3810" OR E3810 OR pariet OR aciphex OR LY-307640 OR LY307640)) OR (TITLE-ABS-KEY(ilaprazol* OR IY81149 OR IY-81149)) OR ((TITLE-ABS-KEY((H2 OR "H 2" OR "histamine 2") PRE/1 (antagonist* OR block*)) OR TITLE-ABS-KEY("H2 antihistamin*")) OR (TITLE-ABS-KEY(ranitidin* OR biotidin OR ranisen OR sostril OR zantac OR zantic OR AH-19065 OR AH19065)) OR (TITLE-ABS-KEY(famotidin* OR YM-11170 OR YM11170 OR pepcid OR MK-208 OR MK208)) OR (TITLE-ABS-KEY(cimetidin* OR biomet OR histodil OR "SK and F-92334" OR "SK and F92334" OR SKF-92334 OR SKF92334 OR tagamet OR altramet OR eureceptor)) OR (TITLE-ABS-KEY(lafutidin* OR FRG-8813 OR protecadin OR stogar)) OR (TITLE-ABS-KEY(roxatidin* OR roxin OR roxit OR HOE-062)) OR (TITLE-ABS-KEY(nizatidin* OR LY-139037 OR LY139037 OR axid)) OR (TITLE-ABS-KEY(lavoltidin* OR AH-23844 OR AH23844 OR loxtidin*)) OR (TITLE-ABS-KEY(niperotidin*)))	
	#3	Click on the Preprints tab on the results page	74
Preprint (Web of Science)	#1	TS=(NSCLC OR SCLC)	378
	#2	TS=(lung OR pulmonary) AND TS=(neoplasm* OR cancer* OR tumor OR tumors OR tumour* OR carcinom* OR adenocarcinom*)	2,195
	#3	#1 OR #2	2,244
	#4	TS="tyrosine kinase inhibitor*" OR TS=((("epidermal growth factor receptor" OR EGF OR EGFR) NEAR/3 (inhibitor* OR TKI OR TKIs))	227
	#5	TS=(gefitinib OR gefitinat OR iressa OR zd-1839 OR zd1839)	20
	#6	TS=(erlotinib OR OSI-774 OR OSI774 OR CP-358774 OR CP358774 OR NSC-718781 OR NSC718781 OR R-1415 OR R1415 OR tarceva)	28
	#7	TS=(afatinib OR BIBW-2992 OR BIBW2992 OR gilotrif OR giotrif OR tovok)	14
	#8	TS=(osimertinib OR azd-9291 OR azd9291 OR mereletinib OR tagrisso)	28
	#9	TS=(icotinib OR bpi-2009 OR bpi2009 OR bpi-2009h OR bpi2009h OR conmana)	0
	#10	TS=(dacomitinib OR pf-00299804 OR pf-299 OR pf-299804 OR pf00299804 OR pf299 OR pf299804 OR vizimpro)	3
	#11	TS=(poziotinib OR hm-781-36b OR hm781-36b OR hm-781-36 OR hm781-36 OR nov-120101 OR nov120101)	2
	#12	TS=(abivertinib OR avitinib OR AC0010 OR canertinib OR CI-1033 OR CI1033 OR cetuximab OR erbitux OR C225 OR depatuxizumab OR ABT-806 OR disitamab OR lapatinib OR tykerb OR GW-282974X OR GW-572016 OR laprituximab OR losatuxizumab OR "lovaxin b" OR mavelertinib OR nazartinib OR EGF-816 OR neratinib OR HKI-272 OR nerlynx OR olafertinib OR olmutinib OR panitumumab OR ABX-EGF OR vectibix OR pertuzumab OR perjeta OR RG-1273 OR rhumab-2C4 OR omnitarg OR rociletinib OR CO-1686 OR rogaratinib OR BAY-1163877 OR sapitinib OR AZD-8931 OR serclutamab OR tarloxotinib OR timigutuzumab OR trastuzumab OR herceptin OR trazimera OR varlitinib OR xilertinib OR zanidatamab)	117
	#13	TS=(lazertinib OR leclaza OR JNJ-73841937 OR YH25448)	1
	#14	#4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13	364
	#15	TS=("gastric acid*" NEAR/1 (suppressant* OR "suppressing agent*" OR inhibitor*))	0
	#16	TS=("proton pump inhibitor*" OR PPI OR PPIs)	651
	#17	TS=(lansoprazol* OR ogastro OR AG-1749 OR AG1749 OR agopton OR bamalite OR lansol OR lanzor OR monolium OR opiren OR prevacid OR "pro ulco" OR promeco OR takepron OR ulpax OR zoton OR ogast OR prezal)	3
	#18	TS=(esomeprazol* OR nexium)	3
	#19	TS=(omeprazol* OR prilosec OR "H 168-68" OR "H 16868")	14
	#20	TS=(lansoprazol* OR R-lansoprazole OR TAK-390MR OR TAK390MR OR TAK-390 OR dexilant OR T-168390 OR T168390)	3
	#21	TS=(pantoprazol* OR SKF-96022 OR SKF96022 OR "SK and F-96022" OR "SK and F96022" OR BY-1023 OR BY1023 OR protonix)	3
	#22	TS=(rabeprazol* OR dexrabeprazole OR "E 3810" OR E3810 OR pariet OR aciphex OR LY-307640 OR LY307640)	2
	#23	TS=(ilaprazol* OR IY81149 OR IY-81149)	0
	#24	#16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23	664
	#25	TS=((H2 OR "H 2" OR "histamine 2") NEAR/1 (antagonist* OR block*)) OR TS="H2 antihistamin*"	12
	#26	TS=(ranitidin* OR biotidin OR ranisen OR sostril OR zantac OR zantic OR AH-19065 OR AH19065)	4
	#27	TS=(famotidin* OR YM-11170 OR YM11170 OR pepcid OR MK-208 OR MK208)	17
	#28	TS=(cimetidin* OR biomet OR histodil OR "SK and F-92334" OR "SK and F92334" OR SKF-92334 OR SKF92334 OR tagamet OR altramet OR eureceptor)	2
	#29	TS=(lafutidin* OR FRG-8813 OR protecadin OR stogar)	0
	#30	TS=(roxatidin* OR roxin OR roxit OR HOE-062)	2
	#31	TS=(nizatidin* OR LY-139037 OR LY139037 OR axid)	1
	#32	TS=(lavoltidin* OR AH-23844 OR AH23844 OR loxtidin*)	0
	#33	TS=niperotidin*	0
	#34	#25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33	30
	#35	#3 AND #14 AND (#15 OR #24 OR #34)	1
	#36	TS=survival*	12,613
	#37	#3 AND (#15 OR #24 OR #34) AND #36	5

Table S2 Results of quality assessment by the Newcastle-Ottawa Scale

Author	Selection				Comparability	Outcome			Total score
	A	B	C	D		a	b	c	
Chen <i>et al.</i> 2016	*	-	*	*	*	*	*	*	7
Chu <i>et al.</i> 2015	*	-	*	-	*	*	*	*	6
Fang <i>et al.</i> 2019	*	-	*	*	*	*	*	*	7
Hilton <i>et al.</i> 2013	*	*	*	*	**	*	*	*	9
Ho <i>et al.</i> 2022	*	-	*	-	*	*	*	-	5
Kumarakulasinghe <i>et al.</i> 2016	*	-	*	*	**	*	*	*	8
Kwok <i>et al.</i> 2020	*	*	*	*	*	*	-	*	7
Lee <i>et al.</i> 2022	*	*	*	*	**	*	*	*	9
Li <i>et al.</i> 2021	*	*	*	*	*	*	*	*	8
Saito <i>et al.</i> 2021	*	*	*	*	**	*	*	*	9
Sedano <i>et al.</i> 2018	*	-	*	-	*	*	-	*	5
Zenke <i>et al.</i> 2016	*	-	*	-	**	*	*	*	7
Guo <i>et al.</i> 2020	*	-	*	-	*	*	*	-	5

Selection: A. Representatives of the exposed cohort; B. Selection of the non-exposed cohort; C. Ascertainment of exposure; D. Demonstration that the outcome of interest was not present at the start of the study. Comparability: Comparability of cohorts based on the design or analysis. Outcome: a. Assessment of outcomes; b. Was follow-up long enough for outcomes to occur; c. Adequacy of follow-up of cohorts.

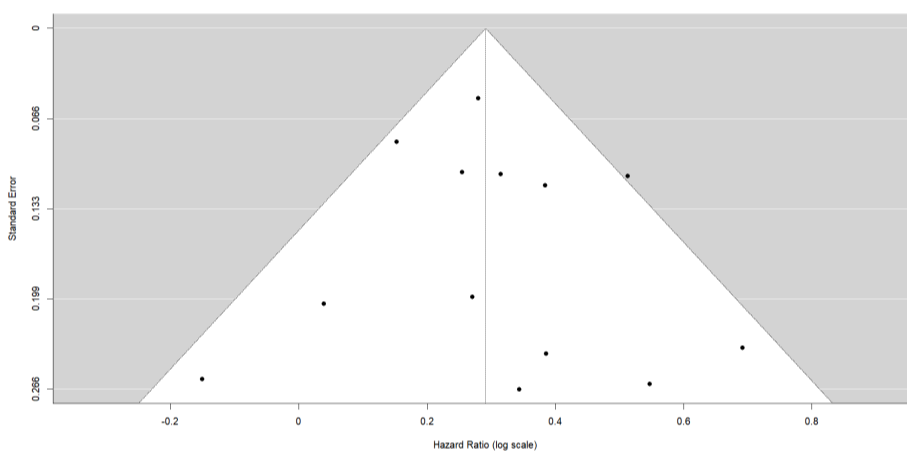


Figure S1 Funnel plot for overall survival. This symmetry indicates that the study results are evenly distributed regardless of sample size, suggesting no presence of publication bias. Specifically, the points are symmetrically distributed around the central line (mean effect size), and smaller sample size studies are spread towards the bottom, indicating that the meta-analysis results are not skewed in any particular direction.

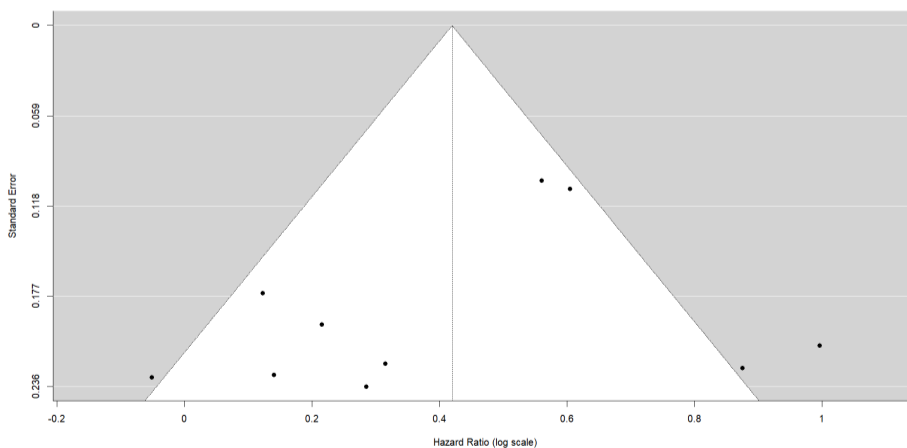


Figure S2 Funnel plot for progression-free survival. The observed slight asymmetry, with more studies skewed to the right and clustering towards the lower end, suggests that smaller studies with non-significant or unfavorable results might be underrepresented. This pattern indicates potential publication bias, where studies showing significant positive results are more likely to be published.

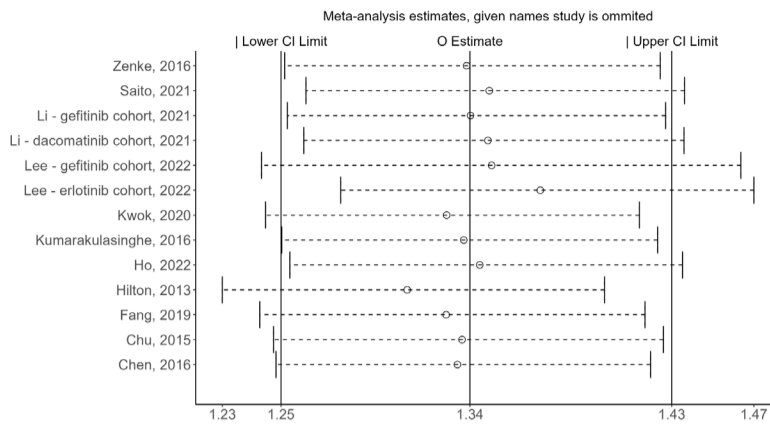


Figure S3 Sensitivity analysis for overall survival. This forest plot displays the results of a sensitivity analysis in a meta-analysis. Each point (O Estimate) represents the hazard ratio estimate for an individual study, with CI shown as vertical lines on either side. The vertical lines indicating lower CI limit, estimate, and upper CI limit represent the mean values when excluding each study. The sensitivity analysis shows that no single study disproportionately affects the overall results. CI, confidence interval.

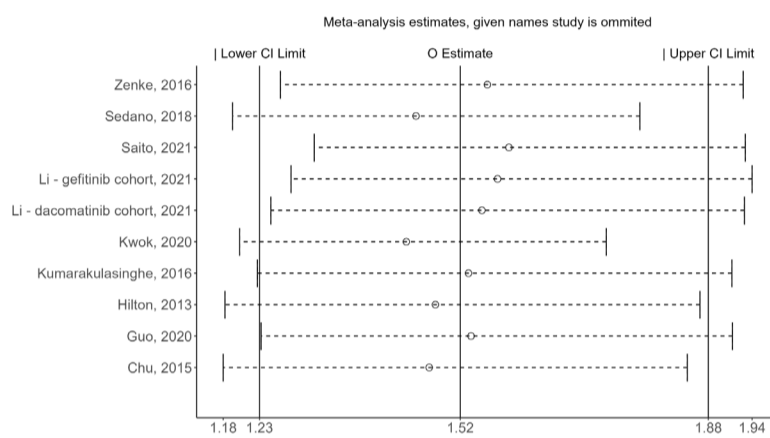


Figure S4 Sensitivity analysis for progression-free survival. This forest plot displays the results of a sensitivity analysis in a meta-analysis. Each point (O Estimate) represents the hazard ratio estimate for an individual study, with vertical lines indicating the 95% CI. The vertical lines indicating "Lower CI Limit" and "Upper CI Limit" mark the lower and upper bounds of the CI for each study. The sensitivity analysis shows that excluding any single study does not significantly affect the overall results, indicating robustness in the findings. CI, confidence interval.

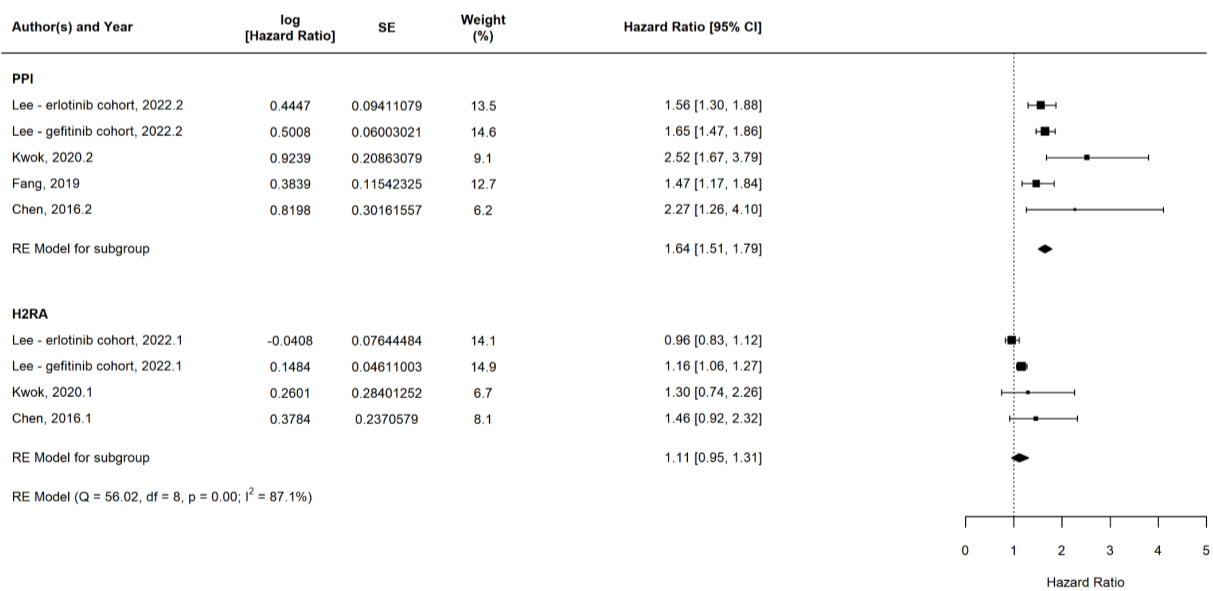


Figure S5 Subgroup analysis of overall survival by type of gastric acid suppressants. This figure shows the results of a subgroup analysis examining the effect of PPIs and H2RAs on overall survival when used with EGFR-TKIs. The analysis indicates that PPIs have a more negative impact on the effectiveness of EGFR-TKIs compared to H2RAs, as reflected by the hazard ratios and confidence intervals. SE, standard error; PPIs, proton pump inhibitors; H2RAs, histamine 2 receptor antagonists; CI, confidence interval; RE, random effect; EGFR-TKIs, epidermal growth factor-tyrosine kinase inhibitors.

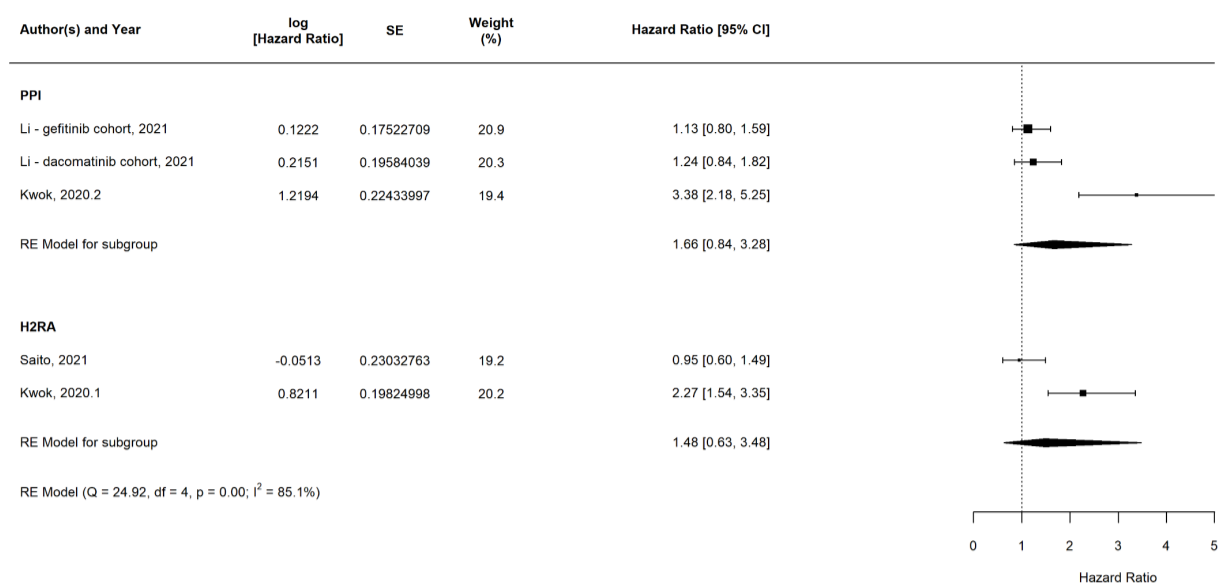


Figure S6 Subgroup analysis of progression-free survival by type of gastric acid suppressants. This figure presents a subgroup analysis of the effect of PPIs and H2RAs on progression-free survival when used with EGFR-TKIs. The analysis indicates no statistically significant correlation between overlap time and progression-free survival for either medication. SE, standard error; PPI, proton pump inhibitor; H2RA, histamine 2 receptor antagonist; CI, confidence interval; RE, random effect; EGFR-TKI, epidermal growth factor receptor-tyrosine kinase inhibitor.

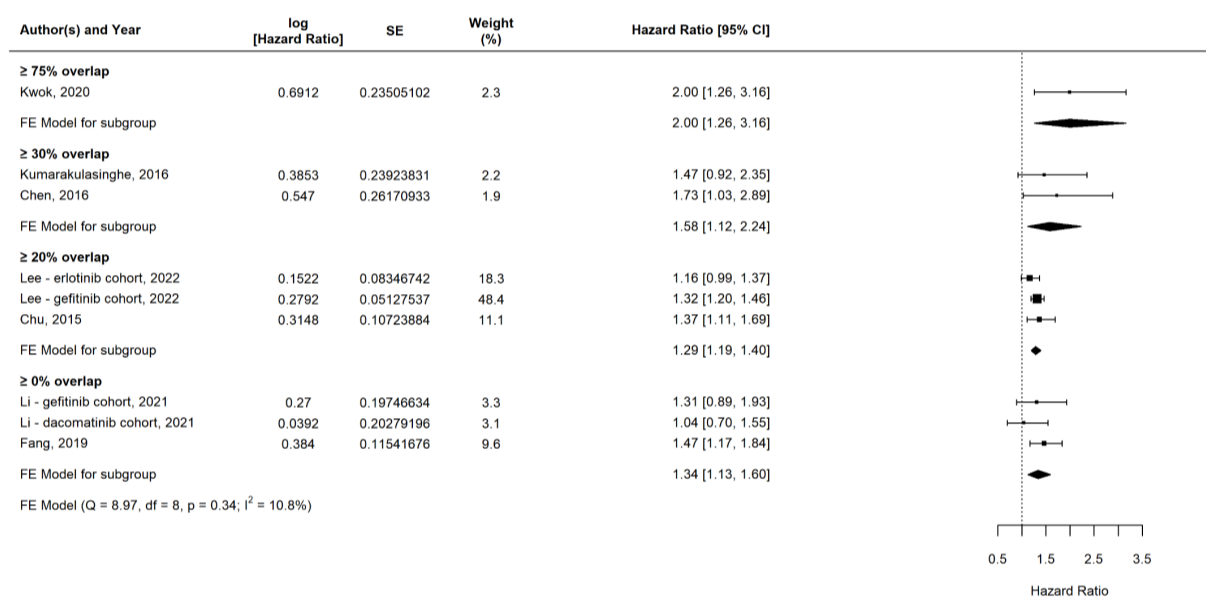


Figure S7 Subgroup analysis of overall survival by gastric acid suppressant overlap time. This figure shows a subgroup analysis of the effect of overlap time of Gastric Acid Suppressants on overall survival in cohorts categorized by overlap percentage (≥0%, ≥20%, ≥30%, and ≥75%). The analysis indicates an increasing trend in hazard ratios with longer overlap times, suggesting a potential for more negative impact on overall survival. SE, standards error; CI, confidence interval; FE, fixed effect.

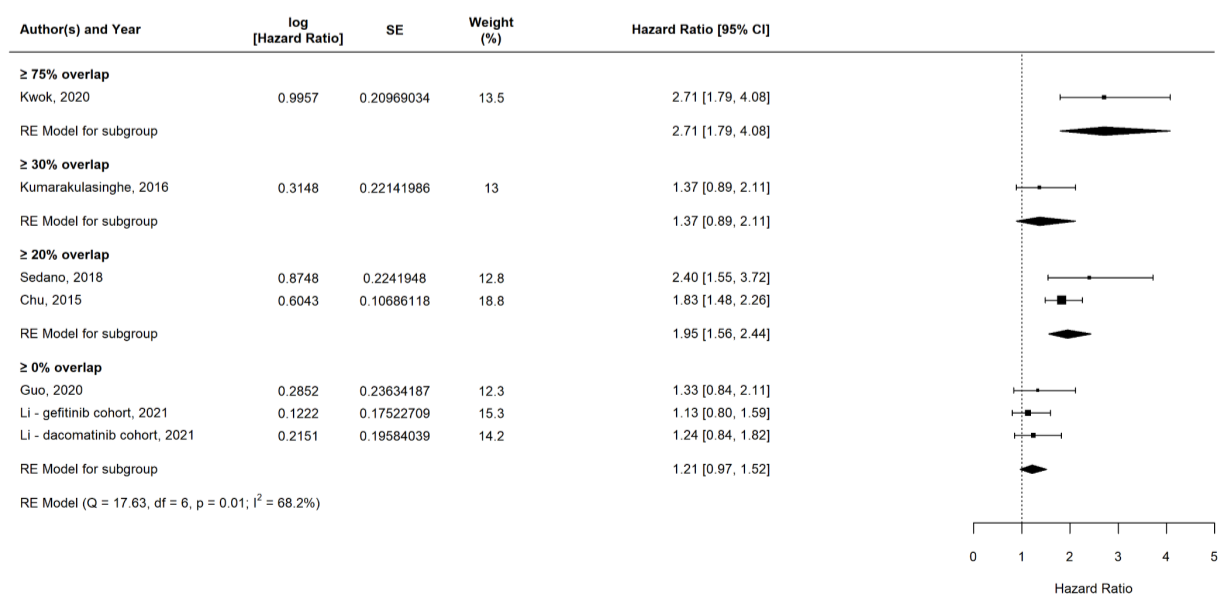


Figure S8 Subgroup analysis of progression-free survival by gastric acid suppressant overlap time. This figure presents a subgroup analysis of the effect of overlap time of Gastric Acid Suppressants on progression-free survival. Studies were categorized based on overlap time into four groups: ≥0% overlap, ≥20% overlap, ≥30% overlap, and ≥75% overlap. The hazard ratios, reflected by the 95% CI, indicated no statistically significant correlation between overlap time and progression-free survival. SE, standard error; CI, confidence interval; RE, random effect.