

## Search strategies and results of 5 databases

Database: PubMed, OVID, Embase, the Cochrane Central Register of Controlled Trials Library databases, Web of Science.

Data Run: 01/07/2022

database	Search strategies	results
PubMed	#1 "Immune Checkpoint Inhibitors" [Mesh Terms]	6109
	#2 "immunotherap*" [Title/Abstract] OR "immune checkpoint inhibit*" [Title/Abstract] OR "ICI" [Title/Abstract] OR "ICIs" [Title/Abstract] OR "immune checkpoint block*" [Title/Abstract] OR "ICB" [Title/Abstract] OR "ICBs" [Title/Abstract] OR "pembrolizumab" [Title/Abstract] OR "avelumab" [Title/Abstract] OR "nivolumab" [Title/Abstract] OR "durvalumab" [Title/Abstract] OR "tremelimumab" [Title/Abstract] OR "atezolizumab" [Title/Abstract] OR "Ipilimumab" [Title/Abstract] OR "Cemiplimab" [Title/Abstract] OR "tiragolumab" [Title/Abstract] OR "Dostarlimab*" [Title/Abstract] OR "Camrelizumab" [Title/Abstract] OR "PD-1" [Title/Abstract] OR "programmed death 1" [Title/Abstract] OR "PD-L1" [Title/Abstract] OR "programmed death-ligand 1" [Title/Abstract] OR "PD-1/PD-L1" [Title/Abstract] OR "anti-PD-1/anti-PD-L1" [Title/Abstract] OR "CTLA-4" [Title/Abstract] OR "Cytotoxic T-lymphocyte antigen 4" [Title/Abstract]	164405
	#3 #1 OR #2	164676
	#4 "Carcinoma" [Title/Abstract] OR "Neoplasms" [Title/Abstract] OR "Cancer" [Title/Abstract] OR "Tumour" [Title/Abstract] OR "Tumor" [Title/Abstract]	3285875
	#5 #3 and #4	102540
	#6 "mutation burden" [Title/Abstract] OR "mutational burden" [Title/Abstract] OR "mutation load" [Title/Abstract] OR "mutational load" [Title/Abstract] OR "TMB" [Title/Abstract] OR "TML" [Title/Abstract]	10061
	#7 #5 and #6	3268
OVID	#1 exp Immune Checkpoint Inhibitors/	14572
	#2 ((immunotherap*) or (immune checkpoint inhibit*) or (ICI) or (immune checkpoint inhibit*) or (ICIs) or (immune checkpoint block*) or (ICB) or (ICBs) or (pembrolizumab) or (avelumab) or (nivolumab) or (durvalumab) or (tremelimumab) or (atezolizumab) or (Ipilimumab) or (Cemiplimab) or (tiragolumab) or (Dostarlimab) or (Camrelizumab) or (PD-1) or (programmed death 1) or (PD-L1) or (programmed death-ligand 1) or (anti-PD-1) or (anti-PD-L1) or (CTLA-4) or (Cytotoxic T-lymphocyte antigen 4)).tw.	153834
	#3 #1 OR #2	156787
	#4 ((Carcinoma) or (Neoplasms) or (Cancer) or (Tumour) or (Tumor)).tw.	3136257
	#5 #3 and #4	94825
	#6 ((mutation burden) or (mutational burden) or (mutation load) or (mutational load) or (TMB) or (TML)).tw.	9467
	#7 #5 and #6	2963
Embase	#1 'immunotherap*':ab,ti OR 'immune checkpoint inhibit*':ab,ti OR 'ici':ab,ti OR 'icis':ab,ti OR 'immune checkpoint block*':ab,ti OR 'icb':ab,ti OR 'icbs':ab,ti OR 'pembrolizumab':ab,ti OR 'avelumab':ab,ti OR 'nivolumab':ab,ti OR 'durvalumab':ab,ti OR 'tremelimumab':ab,ti OR 'atezolizumab':ab,ti OR 'ipilimumab':ab,ti OR 'cemiplimab':ab,ti OR 'tiragolumab':ab,ti OR 'dostarlimab*':ab,ti OR 'camrelizumab':ab,ti OR 'pd-1':ab,ti OR 'programmed death 1':ab,ti OR 'pd-l1':ab,ti OR 'programmed death-ligand 1':ab,ti OR 'pd-1/pd-l1':ab,ti OR 'anti-pd-1/anti-pd-l1':ab,ti OR 'ctla-4':ab,ti OR 'cytotoxic t-lymphocyte antigen 4':ab,ti	251032
	#2 'Carcinoma':ab,ti OR 'Neoplasms':ab,ti OR 'Cancer':ab,ti OR 'Tumour' ab,ti OR 'Tumor':ab,ti	1809315
	#3 #1 and #2	101253
	#4 'mutation burden':ab,ti OR 'mutational burden':ab,ti OR 'mutation load':ab,ti OR 'mutational load':ab,ti OR 'TMB':ab,ti OR 'TML':ab,ti	16290
	#5 #3 and #4	5654
Cochrane	#1 ("immunotherap*" OR immune checkpoint inhibit* OR ICI OR ICIs OR immune checkpoint block* OR ICB OR ICBS OR pembrolizumab OR avelumab OR nivolumab OR durvalumab OR tremelimumab OR atezolizumab OR Ipilimumab OR Cemiplimab OR tiragolumab OR Dostarlimab* OR Camrelizumab	21080

	OR PD-1 OR programmed death 1 OR PD-L1 OR programmed death-ligand 1 OR PD-1/PD-L1 OR anti-PD-1/anti-PD-L1 OR CTLA-4 OR Cytotoxic T-lymphocyte antigen 4):ti,ab,kw #2 (Carcinoma OR Neoplasms OR Cancer OR Tumour OR Tumor):ti,ab,kw #3 #1 and #2 #4 (mutation burden OR mutational burden OR mutation load OR mutational load OR TMB OR TML):ti,ab,kw #5 #3 and #4	242648 13396 1495 460
web of science	#1 (TI=("immunotherap*" OR "immune checkpoint inhibit*" OR "ICI" OR "ICIs" OR "immune checkpoint block*" OR "ICB" OR "ICBs" OR "pembrolizumab" OR "avelumab" OR "nivolumab" OR "durvalumab" OR "tremelimumab" OR "atezolizumab" OR "Ipilimumab" OR "Cemiplimab" OR "tiragolumab" OR "Dostarlimab*" OR "Camrelizumab" OR "PD-1" OR "programmed death 1" OR "PD-L1" OR "programmed death-ligand 1" OR "PD-1/PD-L1" OR "anti-PD-1/anti-PD-L1" OR "CTLA-4" OR "Cytotoxic T-lymphocyte antigen 4")) OR AB=("immunotherap*" OR "immune checkpoint inhibit*" OR "ICI" OR "ICIs" OR "immune checkpoint block*" OR "ICB" OR "ICBs" OR "pembrolizumab" OR "avelumab" OR "nivolumab" OR "durvalumab" OR "tremelimumab" OR "atezolizumab" OR "Ipilimumab" OR "Cemiplimab" OR "tiragolumab" OR "Dostarlimab*" OR "Camrelizumab" OR "PD-1" OR "programmed death 1" OR "PD-L1" OR "programmed death-ligand 1" OR "PD-1/PD-L1" OR "anti-PD-1/anti-PD-L1" OR "CTLA-4" OR "Cytotoxic T-lymphocyte antigen 4") #2 (TS = ("Carcinoma" OR " Neoplasms" OR " Cancer" OR " Tumour" OR " Tumor")) OR AB = ("Carcinoma" OR " Neoplasms" OR " Cancer" OR " Tumour" OR " Tumor") #3 #1 and #2 #4 (TS = ("mutation burden" OR "mutational burden" OR "mutation load" OR "mutational load" OR "TMB" OR "TML")) OR AB = ("mutation burden" OR "mutational burden" OR "mutation load" OR "mutational load" OR "TMB" OR "TML") #5 #3 and #4	191683 4045332 111505 13058 3510