Figure S1: Search strategy of the included studies

1.Pubmed

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| #3 | #1 AND #2 Filters: Clinical Trial, Randomized Controlled Trial, Humans | 225 |
| #1 | ((("lung neoplasms"[MeSH Terms] OR ("lung"[All Fields] AND "neoplasms"[All Fields]) OR "lung neoplasms"[All Fields] OR ("lung"[All Fields] AND "cancer"[All Fields]) OR "lung cancer"[All Fields] OR ("lung neoplasms"[MeSH Terms] OR ("lung"[All Fields] AND "neoplasms"[All Fields]) OR "lung neoplasms"[All Fields] OR ("lung"[All Fields] AND "tumor"[All Fields]) OR "lung tumor"[All Fields]) OR ("lung neoplasms"[MeSH Terms] OR ("lung"[All Fields] AND "neoplasms"[All Fields]) OR "lung neoplasms"[All Fields]) OR (("lung"[MeSH Terms] OR "lung"[All Fields]) AND ("carcinoma"[MeSH Terms] OR "carcinoma"[All Fields] OR "carcinomas"[All Fields] OR "carcinoma s"[All Fields])) OR ("lung neoplasms"[MeSH Terms] OR ("lung"[All Fields] AND "neoplasms"[All Fields]) OR "lung neoplasms"[All Fields] OR ("pulmonary"[All Fields] AND "neoplasm"[All Fields]) OR "pulmonary neoplasm"[All Fields]) OR (("lung"[MeSH Terms] OR "lung"[All Fields]) AND ("neoplasms"[MeSH Terms] OR "neoplasms"[All Fields] OR ("malignant"[All Fields] AND "neoplasm"[All Fields]) OR "malignant neoplasm"[All Fields])) OR (("lung"[MeSH Terms] OR "lung"[All Fields]) AND ("neoplasms"[MeSH Terms] OR "neoplasms"[All Fields] OR ("malignant"[All Fields] AND "tumor"[All Fields]) OR "malignant tumor"[All Fields])) OR ("lung neoplasms"[MeSH Terms] OR ("lung"[All Fields] AND "neoplasms"[All Fields]) OR "lung neoplasms"[All Fields] OR ("pulmonary"[All Fields] AND "neoplasms"[All Fields]) OR "pulmonary neoplasms"[All Fields]) OR (("lung"[MeSH Terms] OR "lung"[All Fields] OR "pulmonary"[All Fields]) AND ("carcinoma"[MeSH Terms] OR "carcinoma"[All Fields] OR "carcinomas"[All Fields] OR "carcinoma s"[All Fields])) OR (("lung"[MeSH Terms] OR "lung"[All Fields] OR "pulmonary"[All Fields]) AND ("carcinoma"[MeSH Terms] OR "carcinoma"[All Fields] OR "carcinomas"[All Fields] OR "carcinoma s"[All Fields])) OR ("lung neoplasms"[MeSH Terms] OR ("lung"[All Fields] AND "neoplasms"[All Fields]) OR "lung neoplasms"[All Fields] OR ("pulmonary"[All Fields] AND "cancer"[All Fields]) OR "pulmonary cancer"[All Fields])) AND "small-cell lung cancer"[All Fields]) OR "SCLC"[All Fields]) AND (humans[Filter]) | 57037 |
| #2 | ("programmed cell death 1 receptor"[MeSH Terms] OR "programmed cell death 1 receptor"[All Fields] OR ("ctla 4 antigen"[MeSH Terms] OR ("ctla 4"[All Fields] AND "antigen"[All Fields]) OR "ctla 4 antigen"[All Fields] OR "ctla 4"[All Fields]) OR (("ctla 4 antigen"[MeSH Terms] OR ("ctla 4"[All Fields] AND "antigen"[All Fields]) OR "ctla 4 antigen"[All Fields] OR "ctla 4"[All Fields]) AND ("antibodie"[All Fields] OR "antibodies"[MeSH Terms] OR "antibodies"[All Fields] OR "antibody s"[All Fields] OR "antibodys"[All Fields] OR "immunoglobulins"[MeSH Terms] OR "immunoglobulins"[All Fields] OR "antibody"[All Fields])) OR ("immune checkpoint inhibitors"[Pharmacological Action] OR "immune checkpoint inhibitors"[MeSH Terms] OR ("immune"[All Fields] AND "checkpoint"[All Fields] AND "inhibitors"[All Fields]) OR "immune checkpoint inhibitors"[All Fields] OR "ctla 4 inhibitor"[All Fields]) OR "PDL1"[All Fields] OR ("PD-L1"[All Fields] AND ("antibodie"[All Fields] OR "antibodies"[MeSH Terms] OR "antibodies"[All Fields] OR "antibody s"[All Fields] OR "antibodys"[All Fields] OR "immunoglobulins"[MeSH Terms] OR "immunoglobulins"[All Fields] OR "antibody"[All Fields])) OR ("immune checkpoint inhibitors"[Pharmacological Action] OR "immune checkpoint inhibitors"[MeSH Terms] OR ("immune"[All Fields] AND "checkpoint"[All Fields] AND "inhibitors"[All Fields]) OR "immune checkpoint inhibitors"[All Fields] OR ("pd"[All Fields] AND "l1"[All Fields] AND "inhibitor"[All Fields]) OR "pd l1 inhibitor"[All Fields]) OR "PD-1"[All Fields] OR ("PD-1"[All Fields] AND ("antibodie"[All Fields] OR "antibodies"[MeSH Terms] OR "antibodies"[All Fields] OR "antibody s"[All Fields] OR "antibodys"[All Fields] OR "immunoglobulins"[MeSH Terms] OR "immunoglobulins"[All Fields] OR "antibody"[All Fields])) OR ("immune checkpoint inhibitors"[Pharmacological Action] OR "immune checkpoint inhibitors"[MeSH Terms] OR ("immune"[All Fields] AND "checkpoint"[All Fields] AND "inhibitors"[All Fields]) OR "immune checkpoint inhibitors"[All Fields] OR "pd 1 inhibitor"[All Fields]) OR ("immune checkpoint inhibitors"[Pharmacological Action] OR "immune checkpoint inhibitors"[MeSH Terms] OR ("immune"[All Fields] AND "checkpoint"[All Fields] AND "inhibitors"[All Fields]) OR "immune checkpoint inhibitors"[All Fields] OR ("immune"[All Fields] AND "checkpoint"[All Fields] AND "inhibitor"[All Fields]) OR "immune checkpoint inhibitor"[All Fields]) OR ("avelumab"[Supplementary Concept] OR "avelumab"[All Fields] OR "msb0010718c"[All Fields]) OR ("bms 936559"[Supplementary Concept] OR "bms 936559"[All Fields]) OR ("bms 936559"[Supplementary Concept] OR "bms 936559"[All Fields] OR "bms936559"[All Fields]) OR ("ipilimumab"[MeSH Terms] OR "ipilimumab"[All Fields]) OR ("tremelimumab"[Supplementary Concept] OR "tremelimumab"[All Fields]) OR ("nivolumab"[MeSH Terms] OR "nivolumab"[All Fields] OR "nivolumab s"[All Fields]) OR ("nivolumab"[MeSH Terms] OR "nivolumab"[All Fields] OR "bms936558"[All Fields]) OR ("nivolumab"[MeSH Terms] OR "nivolumab"[All Fields] OR "mdx1106"[All Fields]) OR ("pembrolizumab"[Supplementary Concept] OR "pembrolizumab"[All Fields]) OR ("pembrolizumab"[Supplementary Concept] OR "pembrolizumab"[All Fields] OR "mk 3475"[All Fields]) OR ("pembrolizumab"[Supplementary Concept] OR "pembrolizumab"[All Fields] OR "lambrolizumab"[All Fields]) OR ("atezolizumab"[Supplementary Concept] OR "atezolizumab"[All Fields]) OR ("atezolizumab"[Supplementary Concept] OR "atezolizumab"[All Fields] OR "mpdl3280a"[All Fields]) OR ("durvalumab"[Supplementary Concept] OR "durvalumab"[All Fields]) OR ("durvalumab"[Supplementary Concept] OR "durvalumab"[All Fields] OR "medi4736"[All Fields]) OR ("ipilimumab"[MeSH Terms] OR "ipilimumab"[All Fields] OR "yervoy"[All Fields]) OR ("tremelimumab"[Supplementary Concept] OR "tremelimumab"[All Fields] OR "ticilimumab"[All Fields]) OR ("nivolumab"[MeSH Terms] OR "nivolumab"[All Fields] OR "opdivo"[All Fields] OR "nivolumab s"[All Fields]) OR ("pembrolizumab"[Supplementary Concept] OR "pembrolizumab"[All Fields] OR "keytruda"[All Fields])) AND (humans[Filter]) | 27767 |

2.Embase

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| #4 | #3 AND 'randomized controlled trial'/de AND ('controlled clinical trial'/de OR 'human cell'/de) AND 'human'/de | 306 |
| #3 | #1 AND #2 | 20383 |
| #2 | atezolizumab OR pembrolizumab OR nivolumab OR ipilimumab OR tremelimumab OR 'immune checkpoint inhibitor' OR immunotherapy OR 'pd 1' OR 'pd l1' OR 'ctla 4' OR lambrolizumab OR ticilimumab | 282221 |
| #1 | (lung AND cancer OR (lung AND tumor) OR (lung AND neoplasms) OR (lung AND carcinoma) OR (pulmonary AND neoplasm) OR (lung AND malignant AND neoplasm) OR (lung AND malignant AND tumor) OR (pulmonary AND neoplasms) OR (pulmonary AND carcinoma) OR (pulmonary AND carcinomas) OR (pulmonary AND cancer)) AND 'small-cell lung cancer' OR 'sclc' OR 'small cell lung cancer' | 165839 |

3.Cochrane

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| #4 |  |  |
| #3 | #1 and #2 | 2316 |
| #2 | (atezolizumab OR pembrolizumab OR nivolumab OR ipilimumab OR tremelimumab OR 'immune checkpoint inhibitor' OR immunotherapy OR 'pd 1' OR 'pd l1' OR 'ctla 4' OR lambrolizumab OR ticilimumab):ti,ab,kw | 36030 |
| #1 | (lung AND cancer OR (lung AND tumor) OR (lung AND neoplasms) OR (lung AND carcinoma) OR (pulmonary AND neoplasm) OR (lung AND malignant AND neoplasm) OR (lung AND malignant AND tumor) OR (pulmonary AND neoplasms) OR (pulmonary AND carcinoma) OR (pulmonary AND carcinomas) OR (pulmonary AND cancer)) AND 'small-cell lung cancer' OR 'sclc' OR 'small cell lung cancer' | 16039 |