

Supplementary file 1. Search strategy

PubMed:

#10 Search (((gastric cancer[Title/Abstract] OR immunotherapy[Title/Abstract] OR PD-1[Title/Abstract] OR PD-L1[Title/Abstract] OR randomized[Title/Abstract]))) AND (((((((((checkpoint) OR ICB))) OR (((((pembrolizumab) OR lambrolizumab) OR Keytruda) OR MK-3475))) OR (((((nivolumab) OR MDX-1106) OR ONO-4538) OR BMS-936558) OR Opdivo))) OR (((((((atezolizumab) OR anti-PDL1) OR MPDL3280A) OR Tecentriq) OR RG7446) OR RG-7446))) OR (((((((ipilimumab) OR MDX-CTLA-4) OR Yervoy) OR MDX-010) OR MDX010))) OR Durvalumab) OR (((((((CTLA-4 Antigen[MeSH Terms]) OR CTLA-4) OR CTLA4) OR CD152) OR Cytotoxic T-LymphocyteAssociated Antigen 4) OR Cytotoxic T-Lymphocyte Antigen 4)))

#9 Search (((((((((checkpoint) OR ICB))) OR (((((pembrolizumab) OR lambrolizumab) OR Keytruda) OR MK-3475))) OR (((((nivolumab) OR MDX-1106) OR ONO-4538) OR BMS-936558) OR Opdivo))) OR (((((((atezolizumab) OR anti-PDL1) OR MPDL3280A) OR Tecentriq) OR RG7446) OR RG-7446))) OR (((((((ipilimumab) OR MDX-CTLA-4) OR Yervoy) OR MDX-010) OR MDX010))) OR Durvalumab) OR (((((((CTLA-4 Antigen[MeSH Terms]) OR CTLA-4) OR CTLA4) OR CD152) OR Cytotoxic T-LymphocyteAssociated Antigen 4) OR Cytotoxic T-Lymphocyte Antigen 4))

#8 Search (((((((CTLA-4 Antigen[MeSH Terms]) OR CTLA-4) OR CTLA4) OR CD152) OR Cytotoxic T-LymphocyteAssociated Antigen 4) OR Cytotoxic T-Lymphocyte Antigen 4)

#7 Search Durvalumab

#6 Search (((((((ipilimumab) OR MDX-CTLA-4) OR Yervoy) OR MDX-010) OR MDX010)

#5 Search (((((((atezolizumab) OR anti-PDL1) OR MPDL3280A) OR Tecentriq) OR RG7446) OR RG-7446)

#4 Search (((((((nivolumab) OR MDX-1106) OR ONO-4538) OR BMS-936558) OR Opdivo)

#3 Search (((((pembrolizumab) OR lambrolizumab) OR Keytruda) OR MK-3475)

#2 Search ((checkpoint) OR ICB)

#1 Search (gastric cancer[Title/Abstract] OR immunotherapy[Title/Abstract] OR PD-1[Title/Abstract] OR PD-L1[Title/Abstract] OR randomized[Title/Abstract])

Embase:

#11 #1 AND #10

#10 #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9

- #9 'cytotoxic t lymphocyte antigen 4'/exp OR 'cd152 antigen':ti,ab OR 'ctla 4':ti,ab OR 'ctla 4 antigen':ti,ab OR 'ctla-4 antigen':ti,ab OR 'antigen cd152':ti,ab OR 'ctla4':ti,ab OR 'cytotoxic t lymphocyte antigen 4':ti,ab OR 'cytotoxic t lymphocyte associated antigen 4':ti,ab
- #8 'ctla-4':ab,ti OR 'ctla4':ab,ti OR 'cd152':ab,ti OR 'cytotoxic t-lymphocyte associated antigen 4':ab,ti OR 'cytotoxic t-lymphocyte antigen 4':ab,ti
- #7 'durvalumab':ab,ti
- #6 'ipilimumab':ab,ti OR 'mdx-ctla-4':ab,ti OR 'yervoy':ab,ti OR 'mdx-010':ab,ti OR 'mdx010':ab,ti
- #5 'atezolizumab':ab,ti OR 'anti-pdl1':ab,ti OR 'mpdl3280a':ab,ti OR 'tecentriq':ab,ti OR 'rg7446':ab,ti OR 'rg-7446':ab,ti
- #4 'nivolumab':ab,ti OR 'mdx-1106':ab,ti OR 'ono-4538':ab,ti OR 'bms-936558':ab,ti OR 'opdivo':ab,ti
- #3 'pembrolizumab':ab,ti OR 'lambrolizumab':ab,ti OR 'keytruda':ab,ti OR 'mk-3475':ab,ti
- #2 'checkpoint':ab,ti OR 'icb':ab,ti
- #1 'gastric cancer':ab,ti OR 'immunotherapy':ab,ti OR 'PD-1':ab,ti OR 'PD-L1':ab,ti OR 'adverse effects':ab,ti

Web of Sciences:

TS=(checkpoint OR ICB OR pembrolizumab OR lambrolizumab OR Keytruda OR MK-3475 OR nivolumab OR MDX-1106 OR ONO-4538 OR BMS-936558 OR Opdivo OR atezolizumab OR anti-PDL1 OR MPDL3280A OR Tecentriq OR RG7446 OR RG-7446 OR ipilimumab OR MDX-CTLA-4 OR Yervoy OR MDX-010 OR MDX010 OR Durvalumab OR "CTLA-4 Antigen" OR CTLA-4 OR CTLA4 OR CD152 OR Cytotoxic "T-LymphocyteAssociated Antigen 4" OR "Cytotoxic T-Lymphocyte Antigen 4") AND TS=(gastric cancer OR immunotherapy OR PD-1 OR PD-L1 OR randomized)

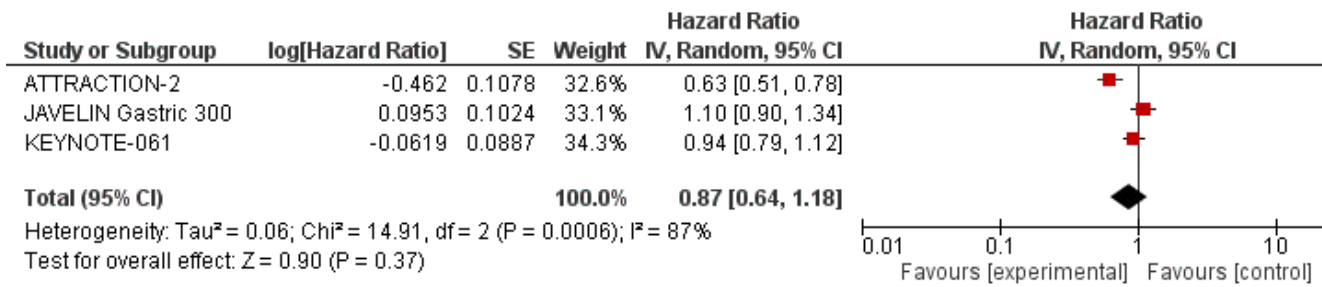


Figure S1. Forest plots of hazard ratios (HRs) for overall survival (OS). The Chi-squared test showed low heterogeneity between the trials. The random-effects model was used.

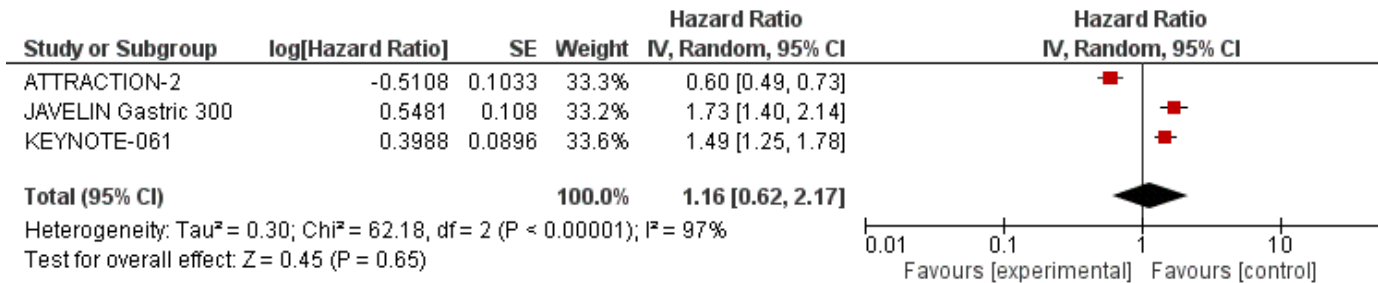


Figure S2. Forest plots of hazard ratios (HRs) for progression free survival (PFS). The Chi-squared test showed heterogeneity between the trials. The random-effects model was used.

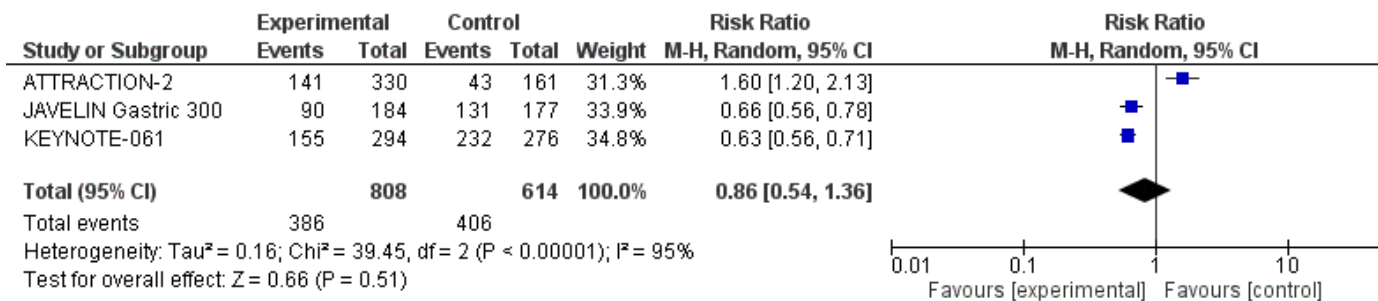


Figure S3. Forest plots of risk ratio (RR) of immune checkpoint inhibitors compared to control arm for all grade treatment-related adverse events.

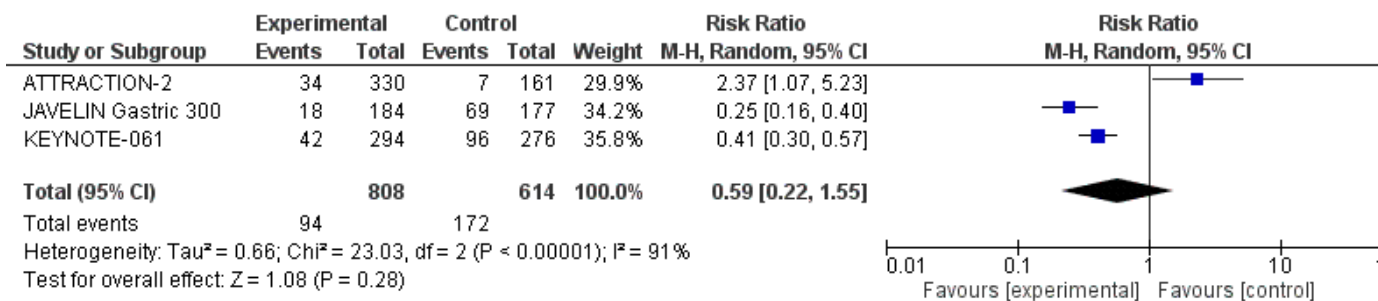


Figure S4. Forest plots of risk ratio (RR) of immune checkpoint inhibitors compared to control arm grade ≥3 treatment-related adverse events.