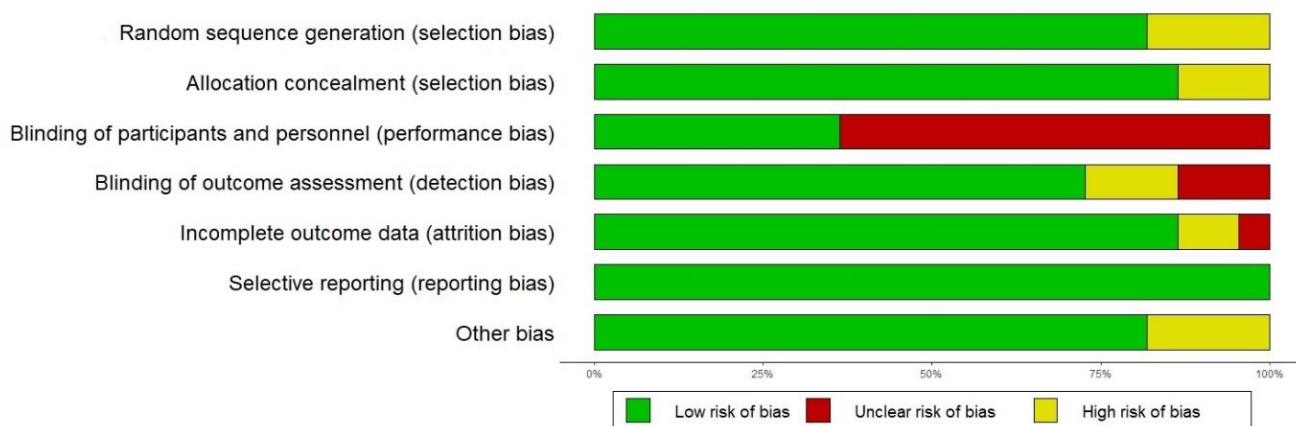


(A)



(B)

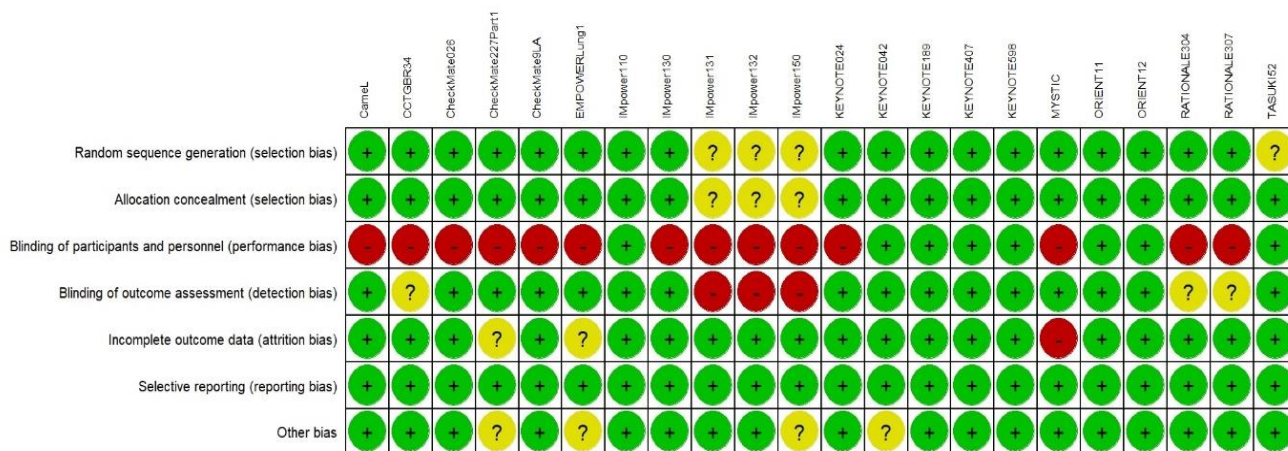
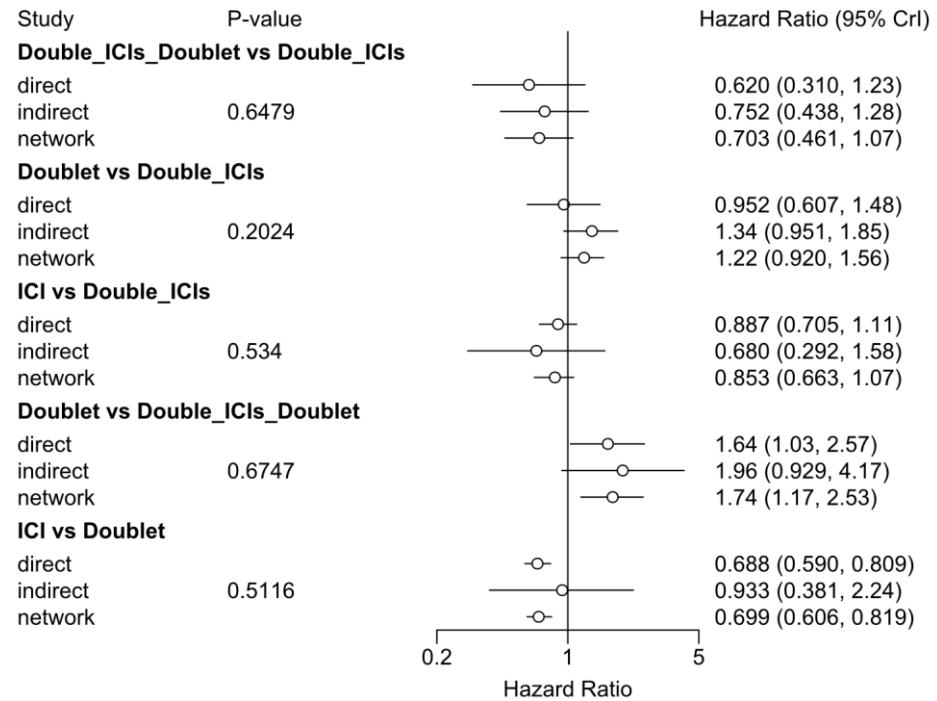


Figure S1. Graphic (A) and tabular representation (B) of risk of bias in all studies included.

(A)



(B)

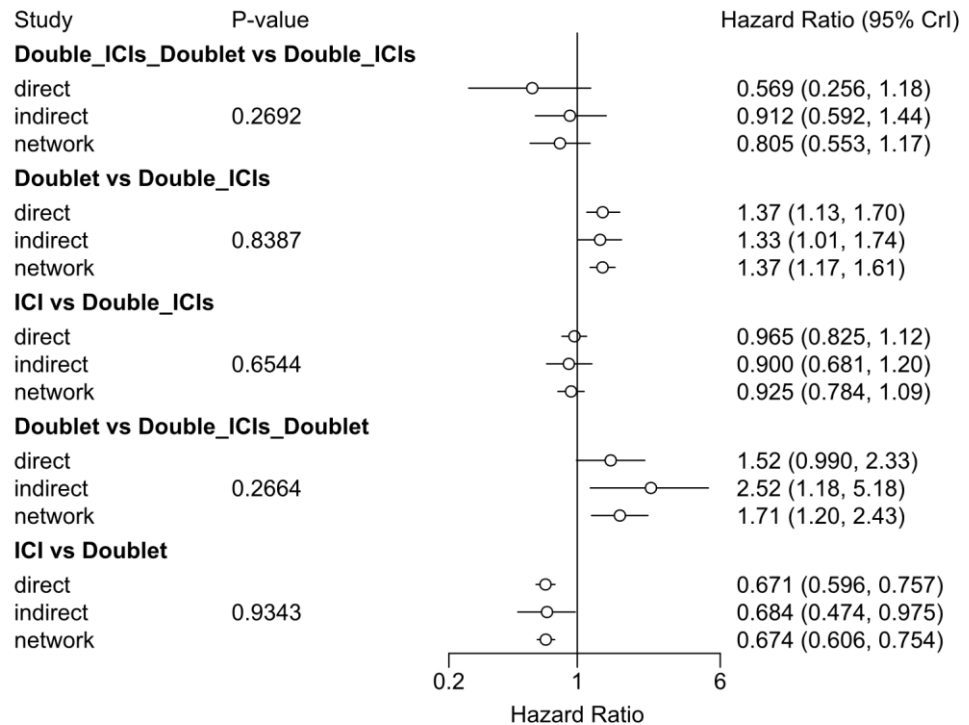


Figure S2. Node splitting analysis for PFS (A) and OS (B).

Table S1. Detailed characteristics of the 22 studies included in the Bayesian network meta-analysis.

Study [ref]	Trial Design	Mutations	PD-L1 Criteria	PD-L1 Detection	Intervention Arm	Control Arm
KEYNOTE-024 [13]	Phase III Open-label	Without EGFR or ALK alterations	$\geq 50\%$	22C3 pharmDx	Pembrolizumab 200mg Q3W	Pemetrexed 500mg/m ² + Carboplatin AUC5~6 or Cisplatin 75mg/m ² Q3W Gemcitabine 1250mg/m ² D1,8 + Carboplatin AUC5~6 or Cisplatin 75mg/m ² Q3W Paclitaxel 200mg/m ² + Carboplatin AUC5~6 Q3W
KEYNOTE-042 [15]	Phase III Open-label	Without EGFR or ALK alterations	$\geq 1\%$	22C3 pharmDx	Pembrolizumab 200mg Q3W	Pemetrexed 500mg/m ² + Carboplatin AUC5~6 Q3W Paclitaxel 200mg/m ² + Carboplatin AUC5~6 Q3W
KEYNOTE-189 [29]	Phase III Double-blind	Without EGFR or ALK alterations	All comers	22C3 pharmDx	Pembrolizumab 200mg Q3W + Pemetrexed 500mg/m ² + Carboplatin AUC5 or Cisplatin 75mg/m ² Q3W	Pemetrexed 500mg/m ² + Carboplatin AUC5 or Cisplatin 75mg/m ² Q3W
KEYNOTE-407 [16]	Phase III Double-blind	Unselected	All comers	22C3 pharmDx	Pembrolizumab 200mg Q3W + Paclitaxel 200mg/m ² + Carboplatin AUC6 Q3W	Paclitaxel 200mg/m ² + Carboplatin AUC6 Q3W
KEYNOTE-598 [43]	Phase III Double-blind	Without EGFR or ALK alterations	$\geq 50\%$	22C3 pharmDx	Pembrolizumab 200mg Q3W + ipilimumab 1mg/kg Q6W	Pembrolizumab 200mg Q3W
IMpower110 [21]	Phase III Open-label	Without EGFR or ALK alterations	$\geq 1\%$	SP142	Atezolizumab 1200mg Q3W	Pemetrexed 500mg/m ² + Carboplatin AUC6 or Cisplatin 75mg/m ² Q3W Gemcitabine 1000mg/m ² D1,8 + Carboplatin AUC5 Q3W Gemcitabine 1250mg/m ² D1,8 + Cisplatin 75mg/m ² Q3W
IMpower130 [19]	Phase III Open-label	Without EGFR or ALK alterations	All comers	SP142	Atezolizumab 1200mg + nab-Paclitaxel 100mg/m ² + Carboplatin AUC6 Q3W	nab-Paclitaxel 100mg/m ² + Carboplatin AUC6 Q3W
IMpower131 [20]	Phase III Open-label	Unselected	All comers	SP142	Atezolizumab 1200mg + nab-Paclitaxel 100mg/m ² + Carboplatin AUC6 Q3W	nab-Paclitaxel 100mg/m ² + Carboplatin AUC6 Q3W
IMpower132 [22]	Phase III Open-label	Without EGFR or ALK alterations	All comers	SP142	Atezolizumab 1200mg + Pemetrexed 500mg/m ² + Carboplatin AUC6 or Cisplatin 75mg/m ² Q3W	Pemetrexed 500mg/m ² + Carboplatin AUC6 or Cisplatin 75mg/m ² Q3W
IMpower150 [30]	Phase III Open-label	Without EGFR or ALK alterations	All comers	SP142	1. Atezolizumab 1200mg + Bevacizumab 15mg/kg + Paclitaxel 200mg/m ² + Carboplatin AUC6 Q3W 2. Atezolizumab 1200mg + Paclitaxel 200mg/m ² + Carboplatin AUC6 Q3W	Bevacizumab 15mg/kg + Paclitaxel 200mg/m ² + Carboplatin AUC6 Q3W
CheckMate 026 [17]	Phase III Open-label	Without EGFR or ALK alterations	$\geq 1\%$	28-8 PharmDx	Nivolumab 3mg/kg Q2W	Gemcitabine 1250mg/m ² D1,8 + Cisplatin 75mg/m ² Q3W

						Gemcitabine 1000mg/m ² D1,8 + Carboplatin AUC5 Q3W Paclitaxel 200mg/m ² + Carboplatin AUC6 Q3W Pemetrexed 500mg/m ² + Carboplatin AUC6 or Cisplatin 75mg/m ² Q3W
CheckMate 9LA [26]	Phase III Open-label	Without EGFR or ALK alterations	All comers	28-8 PharmDx	Nivolumab 350mg Q3W + Ipilimumab 1mg/kg Q6W + Pemetrexed 500mg/m ² + Carboplatin AUC6 or Cisplatin 75mg/m ² Q3W	Pemetrexed 500mg/m ² + Carboplatin AUC6 or Cisplatin 75mg/m ² Q3W
CheckMate 227 [25,41]	Phase III Open-label	Without EGFR or ALK alterations	All comers	28-8 PharmDx	1. Nivolumab 3mg/kg Q2W + Ipilimumab 1mg/kg Q6W 2. Nivolumab 240mg Q2W	Pemetrexed 500mg/m ² + Carboplatin AUC6 or Cisplatin 75mg/m ² Q3W Gemcitabine 1250mg/m ² D1,8 + Cisplatin 75mg/m ² Q3W Gemcitabine 1000mg/m ² D1,8 + Carboplatin AUC5 Q3W
MYSTIC [27]	Phase III Open-label	Without EGFR or ALK alterations	All comers	SP263	1. Durvalumab 20mg/kg + Tremelimumab 1mg/kg Q4W 2. Durvalumab 20mg/kg Q4W	Pemetrexed 500mg/m ² + Carboplatin AUC6 or Cisplatin 75mg/m ² Q3W
CameL [23]	Phase III Open-label	Without EGFR or ALK alterations	All comers	22C3 pharmDx	Camrelizumab 200mg + Pemetrexed 500mg/m ² + Carboplatin AUC5 Q3W	Pemetrexed 500mg/m ² + Carboplatin AUC5 Q3W
CCTG BR 34 [42]	Phase II Open-label	Without EGFR or ALK alterations	All comers	SP263	Durvalumab 1500mg Q4W + Tremelimumab 75mg Q4W + Pemetrexed 500mg/m ² + Carboplatin AUC6 or Cisplatin 75mg/m ² Q3W	Durvalumab 1500mg + Tremelimumab 75mg Q4W
RATIONALE 304 [33]	Phase III Open-label	Without EGFR or ALK alterations	All comers	SP263	Tislelizumab 200mg + Pemetrexed 500mg/m ² + Carboplatin AUC5 or Cisplatin 75mg/m ² Q3W	Pemetrexed 500mg/m ² + Carboplatin AUC5 or Cisplatin 75mg/m ² Q3W
RATIONALE 307 [32]	Phase III Open-label	Without EGFR or ALK alterations	All comers	SP263	Tislelizumab 200mg + Paclitaxel 200mg/m ² + Carboplatin AUC5 Q3W Tislelizumab 200mg + nab-Paclitaxel 100mg/m ² + Carboplatin AUC5 Q3W	Paclitaxel 200mg/m ² + Carboplatin AUC5 Q3W
ORIENT-11 [31]	Phase III Double-blind	Without EGFR or ALK alterations	All comers	22C3 pharmDx	Sintilimab 200mg + Paclitaxel 200mg/m ² + Carboplatin AUC5 or Cisplatin 75mg/m ² Q3W	Paclitaxel 200mg/m ² + Carboplatin AUC5 or Cisplatin 75mg/m ² Q3W
ORIENT-12 [34]	Phase III Double-blind	Without EGFR or ALK alterations	All comers	22C3 pharmDx	Sintilimab 200mg + Gemcitabine 1000mg/m ² D1,8 + Carboplatin AUC5 or Cisplatin 75mg/m ² Q3W	Gemcitabine 1000mg/m ² D1,8 + Carboplatin AUC5 or Cisplatin 75mg/m ² Q3W
EMPOWER-Lung 1 [24]	Phase III Open-label	Without EGFR or ALK alterations	≥ 50 %	22C3 pharmDx	Cemiplimab 350mg Q3W	Pemetrexed 500mg/m ² + Carboplatin AUC5~6 or Cisplatin 75mg/m ² Q3W + Paclitaxel 200mg/m ² + Carboplatin AUC5~6 or Cisplatin 75mg/m ² Q3W Gemcitabine 1250mg/m ² D1,8 + Carboplatin AUC5~6 or Cisplatin 100mg/m ² Q3W

TASUKI-52 [28]	Phase III Double-blind	Without EGFR or ALK alterations	All comers	28-8 PharmDx	Nivolumab 360mg + Bevacizumab 15mg/kg + Paclitaxel 200mg/m ² + Carboplatin AUC6 Q3W	Bevacizumab 15mg/kg + Paclitaxel 200mg/m ² + Carboplatin AUC6 Q3W
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