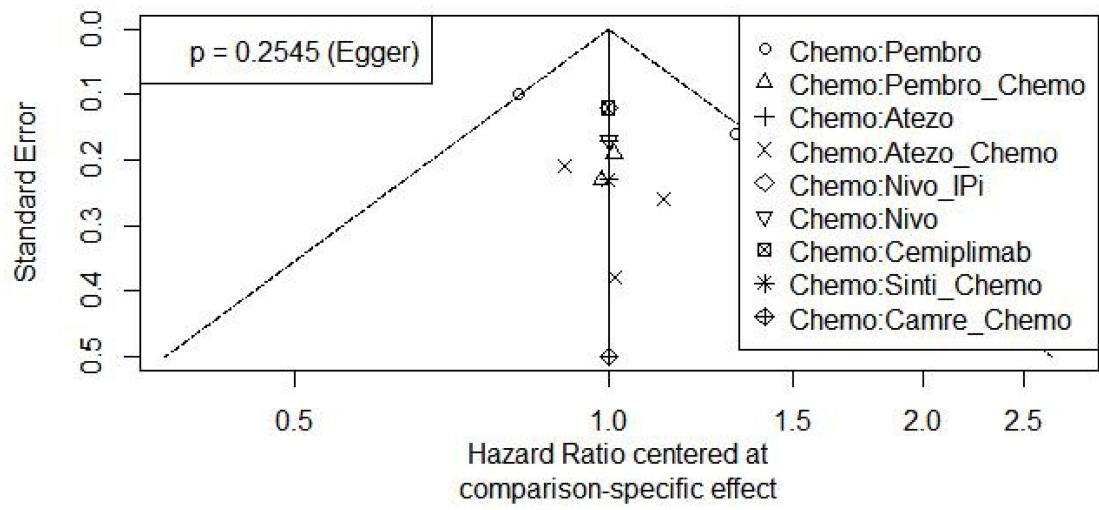
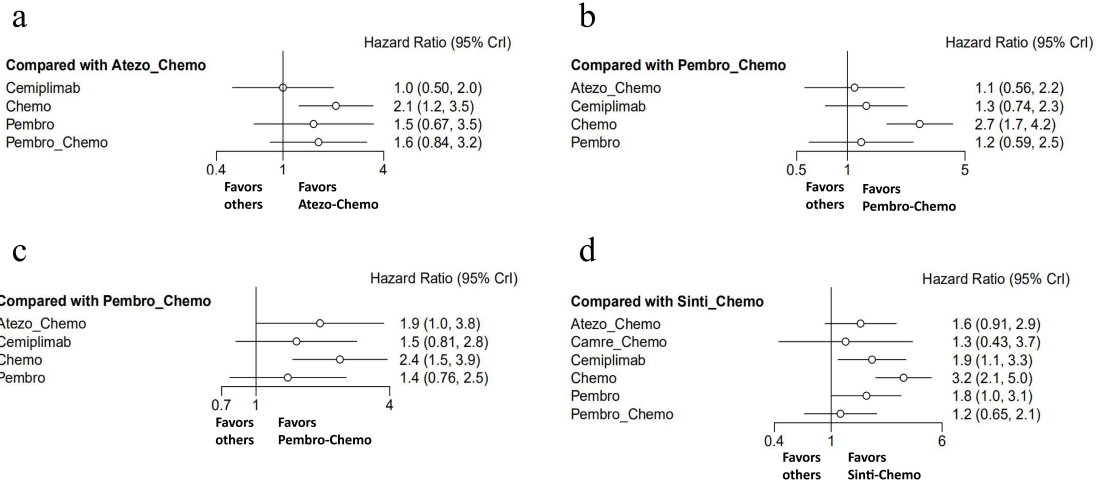




Supplementary Fig.1 The quality of included studies with the Cochrane Collaboration tool.



Supplementary Fig.2 Egger regression test with a funnel plot.



Supplementary Fig.4 Forest plots of pairwise comparisons for subgroup: (A) Overall survival of squamous NSCLC; (B) Progression free survival of squamous NSCLC; (C) Overall survival of nonsquamous NSCLC; (D) Progression free survival of nonsquamous NSCLC.

Supplementary Table 1 Baseline Characteristics of Trials Included in the Network Meta-analysis

Baseline Characteristics of Trials Included in the Network Meta-analysis							
Characteristics	keynote024 n=154/151	keynote042 n=637/637	keynote407 n=278/281	keynote189 n=410/206	IMpower110 n=277/277	IMpower130 n=451/228	IMpower131 n=343/340
	Pembro / Chemo	Pembro / Chemo	Pembro-Chemo / Chemo	Pembro-Chemo / Chemo	Atezo / Chemo	Atezo-Chemo / Chemo	Atezo-Chemo / Chemo
PDL1 expression level (%)							
<1%	0% / 0%	0% / 0%	34% / 35%	31% / 31%	0% / 0%	52% / 53%	46% / 50%
1-49%	0% / 0%	53% / 53%	37% / 37%	31% / 28%	61% / 65%	28% / 29%	40% / 37%
≥50%	100% / 100%	47% / 47%	26% / 26%	32% / 34%	39% / 35%	20% / 18%	14% / 13%
Gender (%)							
Male	60% / 63%	71% / 71%	79% / 84%	62% / 53%	71% / 70%	59% / 59%	82% / 82%
Female	40% / 37%	29% / 29%	21% / 16%	38% / 47%	29% / 30%	41% / 41%	18% / 18%
Age							
Median (years)	64.5 / 66	63 / 64	65 / 65	65 / 64	64 / 65	64 / 65	65 / 65
<65 yr (%)	NR	56% / 55%	46% / 45%	48% / 56%	NR	50% / 50%	50% / 46%
Smoking status (%)							
Current or former	97% / 87%	78% / 78%	92% / 93%	88% / 88%	87% / 87%	89% / 93%	91% / 93%
Never	3% / 13%	22% / 22%	8% / 7%	12% / 12%	13% / 13%	11% / 7%	9% / 7%
ECOG performance-status score (%)							
0	35% / 35%	31% / 30%	26% / 32%	45% / 39%	35% / 37%	42% / 40%	34% / 32%
≥1	65% / 65%	69% / 70%	74% / 68%	55% / 61%	65% / 63%	58% / 60%	66% / 68%
Region of enrollment (%)							
East Asia	14% / 13%	29% / 29%	19% / 19%	1% / 3%	16% / 11%	3% / 1%	12% / 11%
Non-East Asia	86% / 87%	71% / 71%	81% / 81%	99% / 97%	84% / 89%	97% / 99%	88% / 89%
Brain metastases							
	18% / 10%	5% / 5%	7% / 9%	18% / 17%	NR	NR	NR
Baseline Characteristics of Trials Included in the Network Meta-analysis							
Characteristics	IMpower132 n=292/286	CheckMate 227 n=583/583	CheckMate 026 n=271/270	MYSTIC STUDY n=372/374/372	EMPOWER- Lung01 n=283/280	ORIENT 11 n=266/131	CAMEL n=205/207
	Atezo-Chemo / Chemo	Nivo-Ipi / Chemo	Nivo / Chemo	Durva-Treme/ Durva / Chemo	Cemiplimab / Chemo	Sinti-Chemo / Chemo	Camre-Chemo / Chemo
PDL1 expression level (%)							
<1%	50% / 45%	32% / 32%	0% / 0%	20%/25%/22%	0% / 0%	32% / 34%	24% / 33%
1-49%	36% / 43%	33% / 35%	68% / 53%	51%/43%/49%	0% / 0%	28% / 20%	53% / 47%
≥50%	14% / 12%	35% / 43%	32% / 47%	29%/32%/29%	100% / 100%	40% / 46%	15% / 10%
Gender (%)							
Male	66% / 67%	67% / 66%	68% / 56%	72%/68%/67%	88% / 83%	77% / 76%	71% / 72%
Female	34% / 33%	33% / 34%	32% / 45%	28%/32%/33%	12% / 17%	23% / 24%	29% / 28%
Age							
Median (years)	64 / 63	64 / 64	63 / 65	66 / 65 / 64	63 / 64	61 / 61	59 / 61
<65 yr (%)	52% / 59%	53% / 52%	NR	NR	55% / 52%	NR	78% / 74%
Smoking status (%)							
Current or former	87% / 89%	85% / 86%	89% / 89%	85%/85%/86%	100% / 100%	64% / 66%	62% / 63%
Never	13% / 11%	14% / 13%	11% / 11%	15%/15%/14%	0% / 0%	36% / 34%	38% / 37%

ECOG performance-status score (%)

0	43% / 40%	35% / 33%	31% / 34%	42%/37%/43%	27% / 27%	29% / 26%	23% / 17%
≥1	57% / 60%	65% / 67%	69% / 66%	58%/63%/57%	73% / 73%	71% / 74%	77% / 83%

Region of enrollment (%)

East Asia	24% / 23%	NR	NR	32%/33%/32%	11% / 10%	100% / 100%	100% / 100%
Non-East Asia	76% / 77%	NR	NR	68%/67%/68%	89% / 90%	0% / 0%	0% / 0%

Brain metastases

NR	NR	12% / 13%	NR	12% / 12%	14% / 17%	5% / 2%
----	----	-----------	----	-----------	-----------	---------

Abbreviations: Pembro, Pembrolizumab; Chemo, Chemotherapy; Pembro-Chemo, Pembrolizumab plus Chemotherapy; Atezo, Atezolizumab; Atezo-Chemo, Atezolizumab plus Chemotherapy; Nivo-Ipi, Ipilimumab and Nivolumab; Nivo, Nivolumab; Durva-Treme, Durvalumab plus Tremelimumab; Durva, Durvalumab; Sinti-Chemo, Sintilimab plus Chemotherapy; Camre-Chemo, Camrelizumab plus Chemotherapy; NR, not reported.