Title: Indirect comparison of pembrolizumab monotherapy versus nivolumab+ipilimumab in first-line metastatic lung cancer

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Table S1

Base case scenario of overall survival and progression-free survival in patients with PD-L1 TPS≥1% before matching

	Outcomes	
	Overall Survival	**Progression-Free Survival**
ITC HR (95% CI), p-value[a]		
Primary approach[b]	0.98 (0.77, 1.26), 0.900	1.14 (0.92, 1.40), 0.224
Secondary approach[c]	0.96 (0.78, 1.19), 0.719	1.10 (0.89, 1.34), 0.376
Number of events, (%)		
Pembrolizumab	469 (65.0)	549 (76.1)
Nivolumab+ipilimumab	259 (65.4)	289 (73.0)
KN024/KN042: Chemotherapy[d]	530 (75.0)	587 (83.0)
Checkmate 227: Chemotherapy[d]	299 (75.3)	286 (72.0)
Median Months, (95% CI)		
Pembrolizumab	17.3 (15.0; 20.0)	6.0 (4.6; 6.3)
Nivolumab+ipilimumab	16.9 (15.0; 20.0)	5.0 (4.0; 6.2
KN024/KN042: Chemotherapy[d]	12.2 (11.3; 13.7)	6.3 (6.2; 6.5)
Checkmate 227: Chemotherapy[d]	14.9 (12.5; 16.8)	5.5 (4.8; 5.9)
Landmark rate (%) - Pembrolizumab versus nivolumab+ipilimumab		
6-month	73.5 vs 75.2	49.9 vs 45.6
1-year	59.9 vs 62.4	30.9 vs 32.8
2-year	40.8 vs 39.8	16.9 vs 22.0

a: Two-sided p-value calculated from the test statistic associated with the ITC estimate and its standard error
b: Calculated using aggregate data published in the literature for nivolumab+ipilimumab. Bucher methodology using separate study results (estimate and its standard error) with a common control arm
c: Calculated using pseudo-IPD from CheckMate227 Part 1A using a Cox regression model
d: Platinum-doublet chemotherapy for KN024/KN042 and CheckMate227 Part 1A
CI: confidence interval; HR: hazard ratio; ITC: indirect treatment comparison; KN024: KEYNOTE 024; KN42: KEYNOTE 042; PD-L1: Programmed cell death ligand 1; TPS: tumor proportion score.

Table S2

Landmark analysis of overall survival and progression-free survival for chemotherapy arms from KN024/KN042 and CheckMate 227 Part 1a in patients with PD-L1 TPS≥1% before and after matching

	Landmark rate 6-month, %	Landmark rate 1-year, %	Landmark rate 2-year, %
Overall survival			
Before Matching	75.9 vs 78.4	50.8 vs 56.3	29.5 vs 33.3
After Matching	75.1 vs 78.4	52.2 vs 56.3	31.9 vs 33.3
Progression-free survival			
Before Matching	58.2 vs 42.6	25.9 vs 18.8	7.9 vs 7.3
After Matching	57.7 vs 42.6	25.8 vs 18.8	7.2 vs 7.3

KN024: KEYNOTE 024; KN042: KEYNOTE 042; PD-L1: Programmed cell death ligand 1; TPS: tumor proportion score.

Table S3

Pembrolizumab versus nivolumab+ipilimumab for overall survival and progression-free survival in patients with PD-L1 TPS≥1%, TPS≥50% and TPS 1–49%

	Hazard Ratio (95% CI)	
	Before Matching	After Matching
Overall Survival, ≥1%		
Aggregate, truncated[a]	0.98 (0.77; 1.26)	1.07 (0.82; 1.39)
Pseudo IPD, truncated	0.96 (0.78, 1.19)	1.05 (0.84, 1.31)
Aggregate, non-truncated	1.00 (0.78; 1.28)	1.08 (0.83, 1.41)
Pseudo IPD, non-truncated	0.97 (0.79; 1.20)	1.06 (0.85, 1.33)
Progression-Free Survival (BICR), ≥1%		
Aggregate, truncated[a]	1.14 (0.92; 1.40)	1.16 (0.93, 1.45)
Pseudo IPD, truncated	1.10 (0.89, 1.34)	1.12 (0.90, 1.39)
Aggregate, non-truncated	1.14 (0.92; 1.40)	1.16 (0.93; 1.45)
Pseudo IPD, non-truncated	1.10 (0.89; 1.34)	1.12 (0.90; 1.39)
Overall Survival, ≥50%		
Aggregate, truncated[a]	1.00 (0.75; 1.35)	1.05 (0.78; 1.42)
Pseudo IPD, truncated	1.01 (0.75; 1.37)	1.06 (0.78; 1.44)
Aggregate, non-truncated	1.03 (0.77, 1.38)	1.08 (0.80, 1.45)
Pseudo IPD, non-truncated	1.03 (0.77; 1.39)	1.08 (0.80, 1.47)
Progression-Free Survival (BICR), ≥50%		
Aggregate, truncated[a]	1.19 (0.89, 1.58)	1.16 (0.87; 1.55)
Pseudo IPD, truncated	1.18 (0.88, 1.57)	1.15 (0.86; 1.55)
Aggregate, non-truncated	1.19 (0.89,1.58)	1.16 (0.87, 1.55)
Pseudo IPD, non-truncated	1.18 (0.88, 1.57)	1.15 (0.86, 1.55)
Overall Survival, 1–49%		
Aggregate, non-truncated	0.94 (0.68, 1.28)	0.96 (0.65, 1.40)
Progression-Free Survival (BICR), 1–49%		
Aggregate, non-truncated	1.10 (0.81, 1.50)	1.04 (0.73, 1.48)

a: The aggregate/truncated analysis corresponds to the base case analysis and is included for comparison purposes.
BICR: blinded independent committee review; CI: confidence intervals; IPD: individual patient data; PD-L1: Programmed cell death ligand 1; TPS: tumor proportion score.