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10-year outcomes from clinical trials of pembrolizumab (pembro) monotherapy for locally advanced or metastatic non-small cell lung cancer (NSCLC)

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Background

Pembro monotherapy improved survival for participants (pts) with locally advanced/metastatic NSCLC in multiple clinical trials, changing the treatment landscape. Here we report updated results with 10 years of follow-up.

Methods

Pts had previously treated or untreated locally advanced/metastatic NSCLC with any PD-L1 tumor proportion score (TPS; KEYNOTE-001 [KN001]), TPS ≥1% (KEYNOTE-010 [KN010] and KEYNOTE-042 [KN042]), or ≥50% (KEYNOTE-024 [KN024]). Pts received pembro 2 mg/kg Q3W or 10 mg/kg Q2W or Q3W in KN001, and were randomized to pembro 200 mg Q3W vs docetaxel chemotherapy (chemo) in KN010, and platinum-based chemo in KN024 and KN042. Surviving pts had the option to transition to the KEYNOTE-587 (KN587) extension study. The KN587 primary endpoint was OS; secondary endpoints included modified PFS (mPFS; time from randomization or first treatment [KN001] to PD per RECIST v1.1 or death from any cause).

Results

Across the 4 studies, 2031 pts were allocated to pembro and 1131 to chemo; of these, 209 (10.3%) and 50 (4.4%) transitioned to KN587. For pts in KN587, median (range) time from first treatment (KN001) or randomization (KN010, KN024, and KN042) to data cutoff (May 1, 2024) was 124.6 (118.5–142.2) mo, 115.0 (108.8–124.6) mo, 106.4 (102.4–114.3) mo, and 99.0 (86.6–110.2) mo, respectively. OS rates are shown in the table; 10-yr OS rate (95% CI) in KN001 was 11.3% (8.5–14.5). OS favored pembro vs chemo in KN010, KN024, and KN042. Across studies, results were particularly favorable for pts with TPS ≥50% (Table). 10-year mPFS rate (95% CI) in KN001 was 6.6% (4.5%–9.2%). mPFS favored pembro vs chemo in KN010 (HR 0.76; 95% CI, 0.67–0.87), KN024 (HR 0.58; 95% CI, 0.46–0.75), and KN042 (HR 0.91; 95% CI, 0.81–1.01) with long-term follow-up. Table: 3208P

	Pembro	Chemo
KN001 ^{a,b}		
Any TPS	n/N = 54/550	
10y OS rate (95% CI), %	11.3 (8.5–14.5) [—]	
TPS ≥50%	n/N = 25/165	

	Pembro	Chemo
10y OS rate	19.3 (13.1–26.5)	–
KN010 ^b		
TPS ≥1%	n/N = 53/690	n/N = 9/343
10y OS rate	9.3 (7.0–12.1)	1.9 (0.7–4.6)
HR (95% CI)	0.66 (0.58–0.76)	
TPS ≥50%	n/N = 35/290	n/N = 6/152
10y OS rate	15.5 (11.1–20.5)	2.7 (0.7–7.4)
HR	0.55 (0.44–0.68)	
KN024 ^a		
TPS ≥50%	n/N = 36/154	n/N = 14/151
8y OS rate	24.3 (17.6–31.5)	12.8 (7.6–19.3)
HR	0.65 (0.50–0.83)	
KN042 ^a		
TPS ≥1%	n/N = 66/637	n/N = 27/637
8y OS rate	12.0 (9.5–14.8)	4.7 (3.1–6.9)
HR	0.78 (0.69–0.88)	
TPS ≥50%	n/N = 41/299	n/N = 13/300
8y OS rate	16.6 (12.5–21.1)	6.8 (4.1–10.5)
HR	0.70 (0.59–0.83)	

n/N, number of pts in KN587/number of pts in parent study. ^a1L therapy ^b2L+ therapy.

Conclusions

With 10 years of follow-up, pembro monotherapy continued to improve survival vs chemo. Limited additional deaths are noted since previously reported 5-year data.

Clinical trial identification

NCT01295827; NCT01905657; NCT02142738; NCT02220894; NCT03486873.

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Legal entity responsible for the study

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Disclosure

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