

Real World Observations Show Beneficial Outcomes in Patients with NSCLC Treated With Pembrolizumab for More than 2 Years

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Background

- Pembrolizumab is indicated in the 1L treatment of stage IV NSCLC, and is recommended by the FDA for up to 2 years
- Studies show prolonged use of pembrolizumab for >2 years in real-world practice. Outcomes in patients continuing pembrolizumab >2 years have not been studied
- The goal of the study was to evaluate patient outcomes related to pembrolizumab use for >2 years in patients with stage IV NSCLC

Methods

Inclusion Criteria

- Adult stage IV NSCLC patients who initiated pembrolizumab in the 1L setting on /after 01-Jan-2017
- PD-L1 results available on/before LOT1 initiation
- Patients with > 1-year of follow-up after the last date of pembrolizumab administration

Exclusion criteria

- Patients who died during the observation period

Primary endpoint

- Time to next treatment (TTNT) defined as the interval from the start of pembrolizumab in 1L until the start of 2L

Analyses

- K-M analyses to calculate TTNT for subgroups
 - Duration of treatment (DOT) of pembrolizumab <1 year
 - DOT=1-2 years
 - DOT >2 years
- To control for time bias, index date for TTNT calculation was updated considering the treatment duration
- Sensitivity analysis
 - Patients were excluded if there was a treatment gap <60 days between 1L and 2L or if they did not receive 2L

These results suggest that patients with stage IV NSCLC who received pembrolizumab >2 years had better outcomes than those with a shorter duration of treatment (< 1 year or 1-2 years)

Fig 1. Time to Next Treatment Relative to Duration of Pembrolizumab Treatment

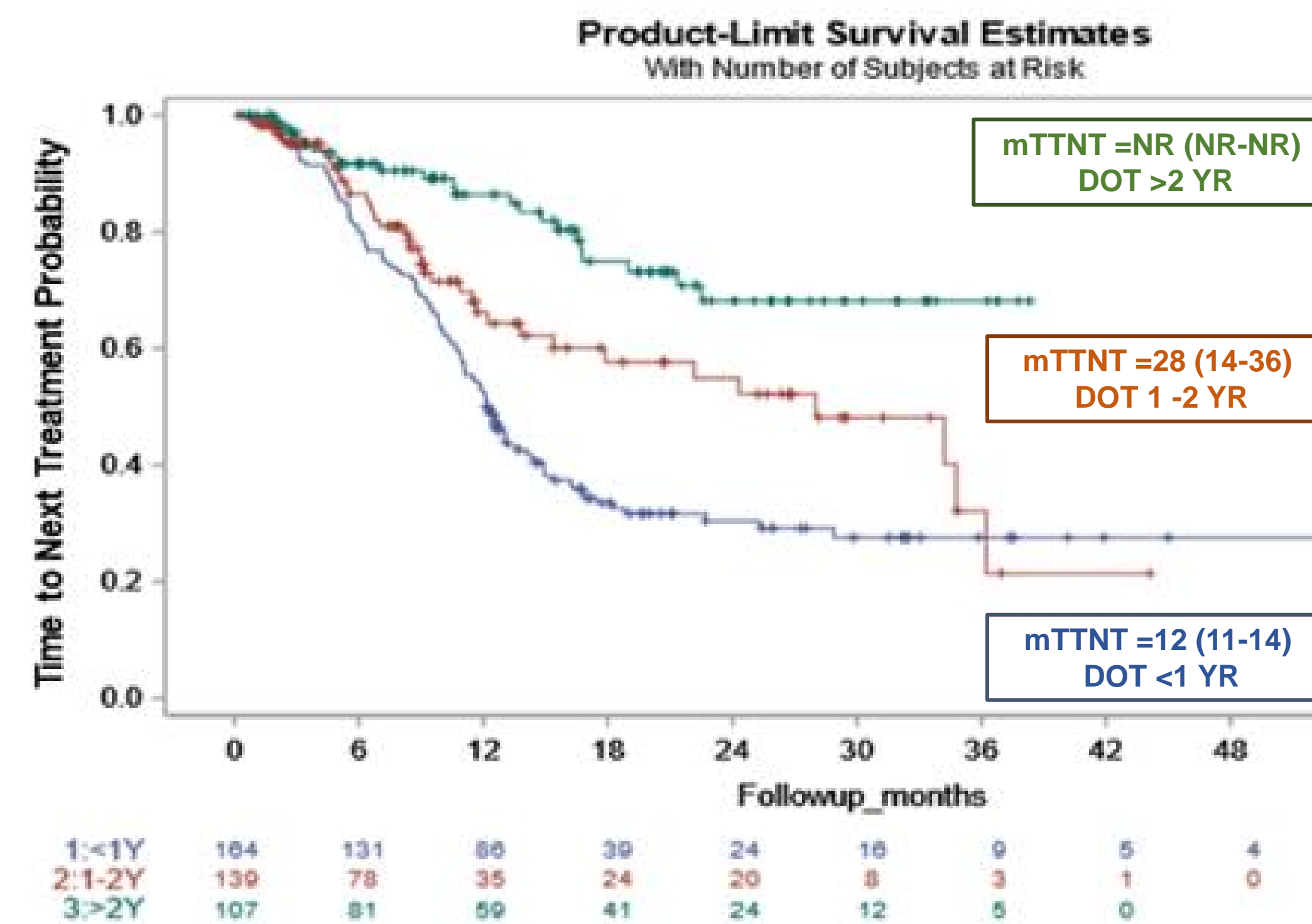


Table 1. Time to Next Treatment –Sensitivity Analysis

	Median TTNT, months (95% CI)
Pembrolizumab DOT >2 years (n=93)	NR (NR-NR)
Pembrolizumab DOT=1-2 years (n=126)	34.2 (22.2- NR)
Pembrolizumab DOT<1 year (n=105)	18.8 (15-NR)

Results

Table 2. Demographics and Baseline Characteristics

	All Patients (n=410)	All Patients (n=410)	
Age at diagnosis		Histology	
Median (IQR)	68.5 (14)	Non-squamous cell carcinoma	338 (82.4)
Gender		Squamous cell carcinoma	43 (10.5)
Female	222 (54.2)	Unknown	29 (7.1)
Male	188 (45.9)		
Race		Comorbidities	
White	281 (68.5)	Diabetes	66 (16.1)
Black or African American	56 (13.7)	Hypertension	175 (42.7)
Asian	2 (0.5)	Cardiovascular disease	167 (40.7)
Other	71 (17.3)	Cerebrovascular accident	65 (15.9)
Smoking status		Congestive cardiac failure	43 (10.5)
Current Use – Active	120 (29.2)	Peptic ulcer disease	7 (1.7)
Previous Use	251 (62.2)	Peripheral vascular disease	68 (16.6)
Never	38 (9.3)	Liver disease	53 (12.9)
Unknown	1 (0.2)	Renal disease	49 (11.9)
ECOG		PD-L1 percentage	
0	97 (23.7)	<1%	85 (20.7)
1	151 (36.8)	≥1% to <50%	94 (22.9)
2	27 (6.6)	≥50%	204 (49.8)
3	8 (1.9)	Unknown	27 (6.6)
Unknown	127 (30.9)		

Study Limitations

- Small sample size
- Patient performance may have influenced DOT
- Adverse events were not assessed

Conclusions

- Patients with Stage IV NSCLC who received pembrolizumab >2 years had better outcomes than those with a shorter DOT (<1 year or =1-2 years). More prospective studies are needed to validate these results and minimize potential confounding factors