1418 TREATMENT-FREE SURVIVAL IN PATIENTS WITH ADVANCED MELANOMA AND NON-SMALL CELL LUNG CANCER RECEIVING IMMUNE CHECKPOINT INHIBITORS: REAL-WORLD OUTCOMES OVER A 3-YEAR TIMESPAN

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Background Patients (pts) receiving immune checkpoint inhibitor (ICI) therapy can experience periods of prolonged disease control after treatment discontinuation. Previous studies have used treatment-free survival (TFS) to characterize this interval in pts with advanced melanoma (AM) and non-small cell lung cancer (NSCLC).[1–3] To date, evaluation of TFS has largely been performed using clinical trial data. Here, we report TFS outcomes in patients with AM and NSCLC receiving ICI therapy over a 3-year timespan using real-world registry data.

Methods Data were obtained using a multi-site immuno-oncology registry of pts receiving ICI therapy from Georgetown-MedStar Health and Hackensack Meridian Health between January 2011 and April 2018. Pts with AM and NSCLC were included and sub-stratified by line of therapy and treatment type for first-line therapy as follows: NSCLC: anti-PD-(L)1 monotherapy; AM: ICI monotherapy (anti-CTLA-4 or anti-PD-(L)1) or the combination. Survival functions were estimated using the Kaplan-Meier (KM) method. TFS was defined as the area between two KM curves for time from initiation to final dose of ICI therapy and time from ICI initiation to initiation of subsequent systemic therapy, death, or referral to hospice. The area between KM curves, including TFS, was estimated using (3-year) restricted mean survival time (RMST).

Results Two-hundred ninety pts with AM and 408 pts with NSCLC were included. The 3-year mean TFS was 9.2 months in the AM cohort and 4.0 months in the NSCLC cohort (table 1). Pts with AM who received ICI therapy first-line achieved a TFS of 10.58 months vs 8.43 in those who received it as second-line therapy or later. Among patients with AM receiving first-line therapy, the use of anti-CTLA-4, anti-PD-(L)1, and combination ICI was associated with mean TFS of 8.13, 8.56, and 15.04 months, respectively (figure 1). In the NSCLC cohort, ICI treatment as first-line, second-line, and later-line therapy was associated with mean TFS of 4.94, 4.25, and 1.98 months, respectively. NSCLC patients who received anti-PD-(L)1 monotherapy as first-line treatment had TFS of 4.43 months.

Conclusions TFS is emerging as a unique, clinically meaningful endpoint for treatment with ICIs. Marked mean TFS was seen in pts with AM and NSCLC over the 3-year period from first ICI initiation, comparable to the intervals observed in clinical trials.[1–3] TFS generally decreased with later lines of therapy and was greater with combination therapy in AM. Future analysis will focus on identifying additional predictors of prolonged TFS in these cohorts.

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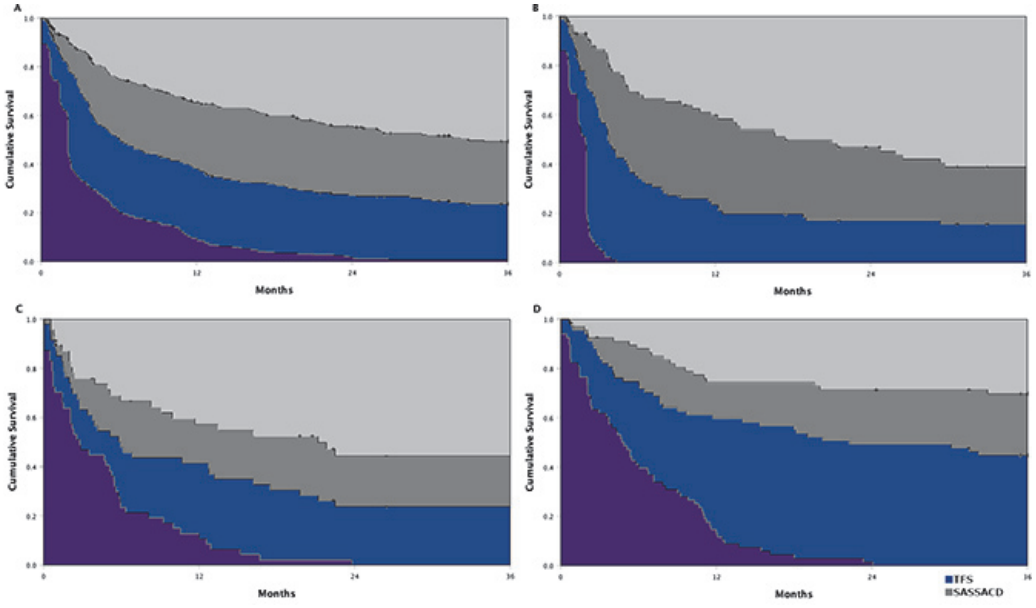
Ethics Approval This study was approved by the Georgetown University Medical Center Institutional Review Board; approval number MODCR00002093.



Abstract 1418 Figure 1 Survival states for all patients with advanced melanoma (A) as well as those who received first-line therapy with anti-CTLA-4 (B), anti-PD-(L)1 (C), and combination (D) therapy. TFS treatment-free survival, SASSACD survival after subsequent anti-cancer drug

Abstract 1418 Table 1 Survival endpoints and states in patients with advanced melanoma and non-small cell lung cancer

Cohort	N	36-Month Restricted Mean Survival Times (months, % total interval)				
		LOT	TTSSACD	OS	TFS	SASSACD
AM	290	4.3 (11.9%)	13.5 (37.5%)	22.9 (63.5%)	9.2 (25.6%)	9.4 (26.0%)
1st-line	201	3.9 (10.8%)	14.5 (40.2%)	22.9 (63.6%)	10.6 (29.4%)	8.4 (23.4%)
≥2nd-line	89	4.5 (12.5%)	10.9 (30.3%)	23.3 (64.7%)	6.4 (17.8%)	12.4 (34.4%)
1st-line CTLA-4 mono.	86	1.6 (4.4%)	9.7 (27.0%)	20.1 (55.8%)	8.1 (22.6%)	10.3 (28.7%)
1st-line PD-(L)1 mono.	47	4.8 (13.2%)	13.3 (37.0%)	20.2 (56.1%)	8.6 (23.8%)	6.9 (19.0%)
1st-line Combined ICI	68	6.2 (17.3%)	21.3 (59.1%)	27.8 (77.2%)	15.0 (41.8%)	6.5 (18.1%)
NSCLC	408	6.4 (17.9%)	10.5 (29.1%)	17.1 (47.6%)	4.0 (11.2%)	6.7 (18.6%)
1st-line	122	7.8 (21.6%)	12.7 (35.4%)	19.5 (54.2%)	4.9 (13.7%)	6.8 (18.9%)
2nd-line	212	6.5 18.1%)	10.8 (29.9%)	17.3 (48.1%)	4.3 (11.8%)	6.5 (18.2%)
≥3rd-line	74	4.0 (11.1%)	6.0 (16.6%)	12.8 (35.6%)	2.0 (5.5%)	6.9 (19.1%)
1st-line PD-(L)1 mono.	91	7.5 (20.7%)	11.9 (33.0%)	19.5 (54.1%)	4.4 (12.3%)	7.6 (21.1%)

LOT length of treatment, TTSSACD time to subsequent anti-cancer drug, OS overall survival, TFS treatment-free survival, SASSACD survival after subsequent anti-cancer drug, AM advanced melanoma, NSCLC non-small cell lung cancer, ICI immune checkpoint inhibitor, NR not reached.

http://dx.doi.org/10.1136/jitc-2023-SITC2023.1418