Real-World Outcomes of Lisocabtagene Maraleucel in Patients with Relapsed and/or Refractory Mantle Cell Lymphoma

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BACKGROUND

- Liso-cel is a CD-19 directed CAR T-cell therapy approved treatment of R/R mantle cell lymphoma[1].
- In the TRANSCEND NHL 001 trial (n=88) liso-cel showed an overall response rate (ORR) of 83% and complete response rate (CRR) of 72%[2] though real-world evidence remains scarce.

OBJECTIVE

- To assess the efficacy and safety of liso-cel in R/R MCL in real-world settings.

METHODS

- Multicenter retrospective study included 34 adult patients with MCL, from 10 USA institutions, who received liso-cel between 01/2023 to 12/2025.
- Outcomes of interest included progression free survival (PFS), overall survival (OS), ORR, CRR, and toxicities.

CONCLUSIONS

- Liso-cel demonstrated high response rates and a manageable safety profile in R/R MCL, consistent with pivotal trial results, supporting its real-world effectiveness & safety.
- Late infections remained an important consideration.

Table 1. Patient & Disease Characteristics (N=34)

Median age, years (range)	74 (53-86)
Male, n (%)	22 (64.7)
ECOG ≥2, n (%)	3 (8.8)
Blastoid or pleomorphic variant, n (%)	12 (35.3)
High Ki-67 (≥30%), n (%)	22 (64.7)
Del17*p/TP53* mutation, n (%)	9 (26.5)
Complex Karyotype, n (%)	9 (26.5)
Median lines of therapy, (range)	2 (1-9)
Prior BTKi exposure, n (%)	33 (97.1)
Received bridging therapy, n (%)	30 (88.2)
Type of bridging therapy • Noncovalent BTKi • Covalent BTKi • Chemotherapy	 10 (29.4) 3 (8.8) 17 (50.0)
Median time from apheresis to infusion, days (range)	36 (26-75)

BTKi, Bruton tyrosine kinase inhibitor.

Efficacy Outcomes

ORR	CRR	6-month DOR rate	Progressive Disease
85.3% (29/34)	**82.4%** (28/34)	**79.8%**	**14.7%** (5/34)

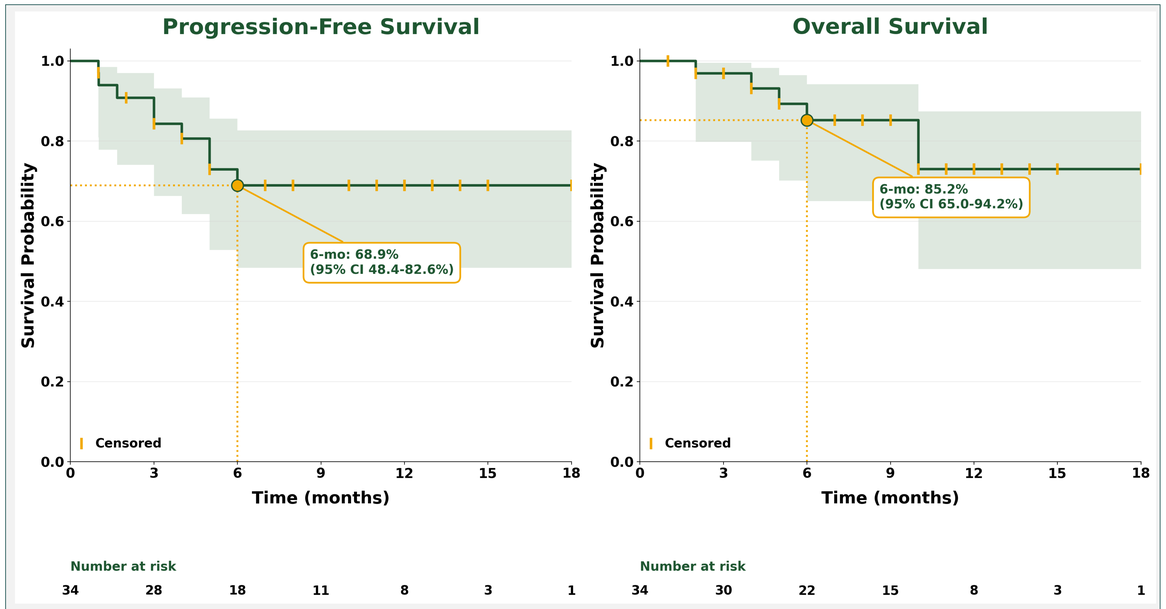

Figure 1. Kaplan-Meier estimates of progression-free survival (PFS) and overall survival (OS) among all 34 patients treated with liso-cel.

Table 2. Safety Outcomes

Toxicity	All Grades n (%)	Grade ≥3 n (%)	Median Duration, days (range)
CRS	20 (58.8)	1 (2.9)	2 (1-7)
ICANS	12 (35.3)	2 (5.9)	4.5 (1-10)

CRS, cytokine release syndrome; ICANS, immune effector cell-associated neurotoxicity syndrome.

Table 3. Infections

Infections (any)	13 (38.2)
Early infections (≤30 days)	6 (17.6)
Late infections (>30 days)	10 (29.4)
Febrile Neutropenia	9 (26.5)

Table 4. Cytopenias

Prolonged thrombocytopenia > Day 30, n (%)	16 (47.1)
Prolonged neutropenia > Day 30, n (%)	9 (26.5)

At **median follow-up of 9 months** (range, 1-18), 6 (17.6%) patients had died (progressive disease=5, sepsis=1).