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ORAL ABSTRACTS

905.OUTCOMES RESEARCH-LYMPHOID MALIGNANCIES

Patient-Reported Outcomes (PROs) from the Phase 2 TRANSCEND FL Study of Lisocabtagene Maraleucel (liso-cel) in Patients (pts) with Relapsed or Refractory Follicular Lymphoma (FL)

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Background: In TRANSCEND FL (NCT04245839), a global, phase 2, open-label, single-arm, multicohort, pivotal study, the CAR T cell therapy liso-cel showed promising efficacy and safety in pts with R/R FL (Morschhauser F, et al. *Hematol Oncol* 2023;41[S2]:877-880). Here, we present corresponding data for PROs.
Methods: Adults with R/R FL after ≥ 1 prior (2L+) line of therapy (LOT) were enrolled in cohorts with 1 (2L), 2 (3L), or ≥ 3 (4L+) prior LOTs. After leukapheresis and lymphodepleting chemotherapy (LDC), pts received 1 infusion of liso-cel (100×10^6 CAR$^+$ T cells). Pts completed the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire-30 items (EORTC QLQ-C30), Functional Assessment of Cancer Therapy-Lymphoma "Additional Concerns" Scale (FACT-LymS), and the EQ-5D-5L on the following schedule: pretreatment (≤ 7 days before LDC; baseline); before infusion on the day of liso-cel infusion (Day 1); on Days 15, 29, 60, 90, 180, 270, 365, 545, and 730 after infusion; and at the end of study assessment. PROs were evaluated using 6 EORTC QLQ-C30 primary domains of interest preselected for relevance to FL, including global health status/quality of life, physical functioning, role functioning, cognitive functioning, fatigue, and pain, and the FACT-LymS subscale assessing lymphoma-specific symptoms. EORTC QLQ-C30 remaining domains, EQ-5D-5L utility index, and EQ-VAS were examined in exploratory analyses. Unless otherwise stated, analyses were performed in all liso-cel-treated pts with assessments at baseline and ≥ 1 postbaseline visit. Separate analyses were done for pts receiving liso-cel as 2L and 3L+ therapy. Linear mixed-effects models for repeated measures were used to calculate least squares (LS) mean change from baseline for visits with ≥ 10 pts. In individual-level analyses, proportions of pts with clinically meaningful changes over time were calculated using published responder definitions. Time to confirmed deterioration or improvement in PROs was assessed in all PRO-evaluable liso-cel-treated pts by the Kaplan-Meier method.
Results: Of 130 liso-cel-treated pts with 2L+ R/R FL, 116 were included in the EORTC QLQ-C30 analysis (median age, 60 years; 63% male; 55% White). Among them, 19 (16%) had received 1 prior line of systemic therapy and 97 (84%) had received ≥ 2 prior LOTs (3L, 44 [38%]; 4L+, 53 [46%]). Assessment completion rates were > 80% across visits. For EORTC QLQ-C30, mean baseline scores in study pts were comparable to EU and US population averages, with a few domains slightly worse than the EU general population. After liso-cel infusion, transient deterioration was observed in physical and role functioning and fatigue up to Day 15. Thereafter, PROs were maintained or showed meaningful improvements relative to baseline that approached or exceeded minimally important difference thresholds at some visits. Overall LS mean changes from baseline showed statistically significant improvements in most primary and some secondary domains of interest (Table 1). In individual-level analyses, from Day 29 onward, most pts (65%–100% across domains and visits) experienced improvements or no changes in primary domains of interest. For all domains, median time to confirmed deterioration was longer than median time to confirmed improvement, indicating that liso-cel-treated pts had a greater chance of achieving improvement in PROs than of experiencing deterioration. More than half of pts achieved meaningful improvements in fatigue, pain, and FACT-LymS at 26, 5, and 15 weeks post infusion, respectively (Table 2). Across PROs, results were comparable between pts receiving liso-

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cel as 2L or 3L+ therapy, although those receiving liso-cel as 2L therapy generally demonstrated greater/faster meaningful improvements in most primary domains, including role and cognitive functioning, fatigue, pain, and FACT-LymS scores.
Conclusions:In TRANSCEND FL, most pts with 2L or 3L+ R/R FL experienced statistically and clinically significant improvements in PROs after liso-cel treatment, including in quality of life, disease symptoms, and functioning. These data, which include the first report of PROs in pts with 2L FL treated with CAR T cell therapy, represent the direct patient experience with liso-cel treatment and complement liso-cel treatment outcomes demonstrating clinical benefit and manageable safety in pts with R/R FL.

Disclosures Cartron: *Janssen:* Honoraria; *MabQi:* Consultancy; *Novartis:* Honoraria; *MedxCell:* Consultancy; *Ownards Therapeutics:* Consultancy; *Gilead:* Honoraria; *Emercell:* Consultancy; *BMS:* Consultancy, Honoraria; *AbbVie:* Consultancy, Honoraria; *Jansen, Gilead, Novartis, F. Hoffmann-La Roche Ltd, BMS, Abbvie:* Honoraria; *MedxCell, Ownards Therapeutics, MabQi, Emercell, F. Hoffmann-La Roche Ltd, BMS, Abbvie:* Consultancy; *MabQi, Ownards Therapeutics, Abbvie, Roche, Bristol Myers Squibb:* Membership on an entity's Board of Directors or advisory committees; *Roche:* Consultancy, Honoraria. **Martin Garcia-Sancho:** *F. Hoffmann-La Roche Ltd, BMS/Celgene, Janssen, Gilead/Kite, Takeda, Eusa Pharma, Abbvie:* Honoraria; *F. Hoffmann-La Roche Ltd, BMS / Celgene, Kyowa Kirin, Novartis, Gilead / Kite, Incyte, Lilly, ADC Therapeutics America, Miltenyi, Ideogen, Abbvie, Sobi:* Consultancy; *AbbVie:* Consultancy, Honoraria; *Ideogen:* Consultancy, Honoraria; *Miltenyi:* Consultancy, Honoraria; *ADC Therapeutics America:* Consultancy, Honoraria; *Takeda:* Consultancy, Honoraria; *Incyte:* Consultancy, Honoraria; *Lilly:* Consultancy, Honoraria; *Gilead / Kite:* Consultancy, Honoraria; *Novartis:* Consultancy, Honoraria; *Eusa Pharma:* Consultancy, Honoraria; *Kyowa Kirin:* Consultancy, Honoraria; *Clinigen:* Consultancy; *Roche:* Consultancy, Honoraria; *Bristol Myers Squibb:* Consultancy, Honoraria. **Reguera:** *KITE:* Speakers Bureau; *AMGEN:* Speakers Bureau; *BMS:* Speakers Bureau; *Janssen:* Consultancy, Speakers Bureau. **Dahiya:** *Kite, a Gilead Company:* Consultancy, Research Funding; *Adaptive Biotechnologies:* Consultancy; *Incyte:* Consultancy; *Bristol Myers Squibb:* Consultancy. **Guo:** *Bristol Myers Squibb:* Consultancy; *Evidera Inc.:* Current Employment. **Shi:** *Thermo Fisher:* Current holder of *stock options* in a privately-held company; *Evidera Inc.:* Current Employment; *Pharmaceutical Product Development Inc.:* Current Employment. **Eliason:** *GlaxoSmith-Kline:* Ended employment in the past 24 months; *Bristol Myers Squibb:* Current Employment, Current equity holder in publicly-traded company. **Kumar:** *Bristol Myers Squibb:* Current Employment, Current equity holder in publicly-traded company. **Farazi:** *Bristol Myers Squibb:* Current Employment, Current equity holder in publicly-traded company. **Fasan:** *Bristol Myers Squibb:* Current Employment, Current equity holder in publicly-traded company; *Sanofi Genzyme:* Speakers Bureau; *Oncopeptides:* Other: Advisory Board, Speakers Bureau. **Izutsu:** *MSD:* Honoraria, Research Funding; *Chugai Pharma:* Honoraria, Research Funding; *Pfizer:* Honoraria, Research Funding; *Kyowa Kirin:* Honoraria, Research Funding; *Zenyaku Kogyo:* Consultancy; *Mitsubishi Tanabe Pharma:* Consultancy; *Nippon Shinyaku:* Consultancy; *Astellas Amgen:* Research Funding; *Incyte:* Research Funding; *Bristol Myers Squibb:* Honoraria, Research Funding; *Novartis:* Honoraria, Research Funding; *Yakult:* Research Funding; *Daiichi Sankyo:* Honoraria, Research Funding; *Beigene:* Research Funding; *Loxo Oncology:* Research Funding; *Regeneron:* Research Funding; *Janssen:* Honoraria; *SymBio Pharmaceuticals:* Honoraria; *Eli Lilly:* Honoraria; *Meiji Seika:* Honoraria; *Nihon Kayaku:* Honoraria; *Genmab:* Consultancy, Honoraria, Research Funding; *AstraZeneca:* Consultancy, Honoraria, Research Funding; *Ono Pharmaceuticals:* Consultancy, Honoraria; *Eisai:* Consultancy, Honoraria, Research Funding; *Takeda:* Consultancy, Honoraria; *Otsuka:* Consultancy, Research Funding; *Abbvie:* Consultancy, Honoraria, Research Funding.

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Table 1. Overall LS mean changes from baseline

Domain[a]	Overall LS mean change (95% CI)			MID[b]	
	Overall population	2L FL	3L+ FL	Imp	Det
EORTC QLQ-C30	N = 116	n = 19	n = 97		
Global health status/QOL	2.9 (0.9, 4.9)[c]	1.3 (−2.7, 5.2)	3.2 (0.9, 5.4)[c]	5	−5
Physical functioning	0.7 (−0.8, 2.2)	0.7 (−2.5, 3.9)	0.7 (−0.9, 2.4)	2	−5
Role functioning	0.8 (−1.7, 3.3)	3.4 (−2.2, 9.1)	0.2 (−2.6, 2.9)	6	−7
Cognitive functioning	2.0 (0.1, 3.8)[c]	2.1 (−2.7, 6.8)	1.9 (−0.1, 4.0)	3	−1
Fatigue	−2.6 (−5.0, −0.2)[c]	−6.7 (−10.6, −2.8)[c]	−1.7 (−4.5, 1.0)	−4	5
Pain	−4.8 (−7.1, −2.6)[c]	−6.4 (−10.9, −2.0)[c]	−4.5 (−7.1, −2.0)[c]	−5	3
Emotional functioning	6.2 (4.0, 8.4)[c]	9.5 (4.7, 14.3)[c]	5.6 (3.2, 8.1)[c]	6	−3
Social functioning	0.6 (−2.3, 3.5)	−2.5 (−8.8, 3.8)	1.2 (−2.0, 4.4)	3	−6
Nausea and vomiting	1.6 (0.1, 3.1)[c]	1.2 (−1.2, 3.7)	1.8 (−0.03, 3.5)	−3	5
Dyspnea	−6.8 (−8.9, −4.6)[c]	−9.3 (−13.7, −4.9)[c]	−6.4 (−8.7, −4.0)[c]	−2	5
Insomnia	−7.4 (−10.4, −4.4)[c]	−7.9 (−15.8, 0.1)	−7.3 (−10.5, −4.1)[c]	−5	2
Appetite loss	−0.7 (−2.7, 1.3)	−0.9 (−4.8, 2.9)	−0.8 (−3.0, 1.5)	−7	2
Constipation	−2.0 (−4.2, 0.3)	1.8 (−2.8, 6.3)	−2.8 (−5.4, −0.3)[c]	−4	5
Diarrhea	−5.6 (−7.4, −3.8)[c]	−4.7 (−9.7, 0.4)	−5.8 (−7.8, −3.9)[c]	−3	5
Financial difficulties	−0.7 (−4.1, 2.8)	−1.6 (−8.0, 4.7)	−0.5 (−4.6, 3.6)	−3	2
FACT-LymS	N = 122 2.1 (1.4, 2.9)[c]	n = 20 3.3 (1.8, 4.8)[c]	n = 102 1.9 (1.1, 2.8)[c]	3	−3
EQ-5D-5L	N = 115	n = 19	n = 96		
Utility index	0.03 (0.01, 0.05)[c]	0.004 (−0.04, 0.05)	0.04 (0.02, 0.06)[c]	0.08	−0.08
EQ-VAS	3.2 (1.3, 5.2)[c]	3.3 (0.3, 6.2)[c]	3.2 (0.9, 5.4)[c]	7	−7

[a]Primary domains of interest are in shaded rows; all others are secondary domains of interest. The analysis was based on changes in PROs from baseline through Day 730. A positive score denotes improvement in PROs or functional status for EORTC QLQ-C30, FACT-LymS, and EQ-5D-5L utility index and EQ-VAS, and a negative score denotes improvement in symptoms for the symptom domains of the EORTC QLQ-C30; [b]MID thresholds are defined for EORTC QLQ-C30 (Cocks K, et al. *Eur J Cancer* 2012;48:1713–1721), FACT-LymS (Hlubocky FJ, et al. *Leuk Lymphoma* 2013;54:1942–1946), and EQ-5D-5L utility index and EQ-VAS (Pickard AS, et al. *Health Qual Life Outcomes* 2007;5:70); [c]$P < 0.05$.
CI, confidence interval; Det, deterioration; Imp, improvement; MID, minimally important difference; NE, not evaluable; QOL, quality of life.

Table 2. Median time to confirmed PRO improvement or deterioration

Domain	Median (95% CI) time to confirmed improvement (weeks)			Median (95% CI) time to confirmed deterioration (weeks)		
	Overall population (N = 130)	2L FL (n = 23)	3L+ FL (n = 107)	Overall population (N = 130)	2L FL (n = 23)	3L+ FL (n = 107)
EORTC QLQ-C30						
Global health status/QOL	10.1 (6.1, 27.6)	10.1 (5.1, 41.1)	10.4 (6.1, 40.1)	29.0 (3.0, 58.0)	13.9 (1.7, NE)	40.0 (3.6, 58.0)
Physical functioning	10.9 (5.1, 27.6)	3.1 (1.0, NE)	11.1 (6.7, 27.6)	57.6 (10.0, NE)	NE (5.1, NE)	29.0 (6.1, 81.4)
Role functioning	10.6 (5.1, 15.1)	5.9 (1.1, 14.1)	10.7 (5.1, 16.0)	75.6 (40.1, NE)	NE (52.9, NE)	57.6 (18.1, NE)
Cognitive functioning	6.1 (4.0, 27.1)	5.7 (1.0, 41.1)	10.0 (4.0, 27.1)	85.0 (79.1, NE)	NE (13.9, NE)	80.1 (60.1, NE)
Fatigue	26.1 (10.1, 53.9)	6.0 (1.9, NE)	27.1 (10.6, 57.9)	27.6 (5.0, 58.0)	77.9 (1.9, NE)	25.1 (3.1, 57.6)
Pain	5.0 (3.4, 10.1)	3.0 (1.0, 10.1)	5.0 (3.7, 10.1)	83.1 (62.1, NE)	NE (13.9, NE)	81.4 (55.3, NE)
Emotional functioning	9.0 (5.1, 10.9)	3.0 (1.1, 11.1)	9.1 (5.7, 11.1)	79.1 (40.1, NE)	NE (13.9, NE)	79.1 (29.1, NE)
Social functioning	12.1 (9.3, 27.7)	10.1 (1.1, NE)	14.7 (9.3, 27.7)	27.6 (5.6, NE)	77.9 (3.7, NE)	26.9 (5.0, NE)
Nausea and vomiting	5.9 (1.7, 6.1)	6.0 (1.1, 9.9)	5.5 (1.7, 6.1)	NE (77.4, NE)	NE (1.1, NE)	NE (77.4, NE)
Dyspnea	6.0 (3.9, 14.9)	13.9 (2.9, NE)	5.2 (3.7, 15.1)	NE (NE, NE)	NE (NE, NE)	NE (81.4, NE)
Insomnia	15.1 (9.1, NE)	NE (1.0, NE)	11.1 (6.1, 27.1)	NE (NE, NE)	NE (70.1, NE)	NE (NE, NE)
Appetite loss	9.0 (5.9, 15.1)	6.0 (1.1, 14.9)	9.4 (5.6, 26.1)	NE (40.4, NE)	NE (1.7, NE)	81.4 (29.6, NE)
Constipation	10.6 (6.0, 40.1)	4.9 (3.7, 6.0)	10.6 (6.0, 40.1)	79.9 (78.1, NE)	NE (3.1, NE)	79.9 (77.4, NE)
Diarrhea	4.9 (2.1, 11.1)	5.4 (1.0, NE)	4.7 (2.1, 11.1)	NE (81.4, NE)	NE (79.1, NE)	NE (81.4, NE)
Financial difficulties	40.1 (25.9, NE)	NE (1.1, NE)	28.1 (15.0, NE)	NE (81.4, NE)	NE (54.4, NE)	NE (79.6, NE)
FACT-LymS	15.1 (7.0, 41.1)	5.6 (1.9, 41.1)	27.1 (9.4, 54.0)	NE (56.7, NE)	NE (70.1, NE)	77.4 (40.1, NE)
EQ-5D-5L						
Utility index	11.1 (6.0, 40.6)	10.1 (1.0, 41.1)	15.0 (6.0, NE)	81.4 (67.3, NE)	NE (40.9, NE)	81.4 (58.0, NE)
EQ-VAS	40.3 (13.9, NE)	28.6 (3.6, NE)	40.3 (13.9, NE)	NE (57.6, NE)	NE (77.9, NE)	81.4 (42.7, NE)

Meaningful improvement and deterioration in EORTC QLQ-C30 domains were defined as score changes from baseline of ± 10 for global health status/QOL, fatigue, and physical functioning and ± 15 for pain, cognitive functioning, and role functioning; for FACT-LymS, ± 3; for EQ-5D-5L, ± 0.8 for Utility index and ± 7 for EQ-VAS.
CI, confidence interval; NE, not evaluable; QOL, quality of life.

Figure 1

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