HSD87

Chimeric antigen receptor T cell (CAR T) therapy as second-line (2L) treatment for patients with relapsed/refractory large B-cell lymphoma (R/R LBCL): Therapy choice and treatment barriers among US oncologists

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BACKGROUND

- The treatment space for relapsed/refractory large B-cell lymphoma (R/R LBCL) has changed rapidly in recent years, with the introduction and expansion of chimeric antigen receptor T cell (CAR T), bispecific antibodies, and antibody-drug conjugates (ADC) therapies
- In 2022, approval for the CAR T therapy lisocabtagene maraleucel (liso-cel) was expanded to the 2L setting for select patients with R/R LBCL based on results from the phase 3 TRANSFORM study[1]
- With the introduction of CAR T options earlier in the R/R LBCL treatment landscape, use of CAR T in the 2L, preferred treatment sequencing, and potential access barriers remain unclear

OBJECTIVES

This study aimed to understand oncologists' perspectives on the use of and barriers to CAR T therapy earlier in treatment for patients with R/R LBCL, including their preferred sequencing of CAR T therapy, bispecific antibodies, and ADCs in this evolving treatment space

METHODS

01 Online Survey
US-based oncologists completed an online survey on participant characteristics

02 In-Person Forums
Oncologists attended at least one in-person forum (June 2023 and/or October 2024).*

03 Results Review
Results from the TRANSFORM trial (June 2023) and a real-world meta-analysis on LBCL (Oct 2024) were reviewed

04 Real-Time Responses
Oncologists responded to questions in real-time via audience response system technology

05 Analysis
Response data was summarized descriptively for each forum separately

*A subset of June 2023 attendees also participated in a breakout session

RESULTS

Provider & Practice Characteristics (Table 1)

- In-person forums were attended by 121 practicing hematologists/oncologists (69 in June [including 23 who participated in the breakout session]; 52 in October 2024)
- Participating providers practiced in predominantly community settings (63.8% in June 2023; 61.5% in October 2024)
- Providers were predominantly hematologists (52.2% in June 2023; 63.5% in October 2024) with a median of 17 (in June 2023) and 20 (in Oct 2024) years in clinical practice

Table 1. Provider and practice characteristics

	June 2023 (N=69)	October 2024 (N=52)
Practice setting, n (%)		
Community practice	44 (63.8)	32 (61.5)
Non-community	25 (36.2)	20 (38.5)
Years in practice post-residency		
Median (range)	17.0 (1.0-40.0)	20.0 (0.0-40.0)
Primary medical specialty, n (%)		
Medical oncology	24 (34.8)	19 (36.5)
Hematology	36 (52.2)	33 (63.5)
Surgical oncology	1 (1.4)	0 (0.0)
Did not respond to the question	8 (11.6)	0 (0.0)

June 2023 Forum - Awareness of CAR T Approvals in 2L & CAR T Therapy Preference (Figures 1-4)

- Approximately half of respondents (26/49; 53.1%) reported that their CAR T therapy referrals of 2L liso-cel for patients with R/R LBCL increased after the FDA approval, while 5/49 respondents (10.2%) were not aware of the label expansion (**Figure 1**)
- After reviewing the TRANSFORM trial data on liso-cel, half of respondents (25/50; 50.0%) anticipated using liso-cel in 2L for eligible LBCL patients and the majority of respondents (33/50; 66.0%) felt the results reinforced the use of CAR T in earlier lines (**Figure 2**)
- The majority of respondents (33/51; 64.7%) prioritized CAR T therapy slot availability over a specific CAR T therapy when selecting a 2L CAR T therapy for a patient with LBCL (**Figure 3**). In a breakout session, 61% of respondents (14/23) cited availability of manufacturing slots as the most impactful factor for a patient's CAR T therapy wait time (**Figure 4**)

RESULTS

Figure 1. Impact of FDA approval on referral of liso-cel in 2L therapy, among June 2023 respondents (n=49)

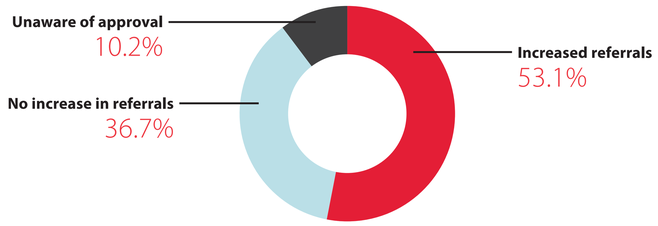


Figure 2. Opinion(s) of liso-cel as 2L therapy for patients with LBCL after reviewing the TRANSFORM study, among June 2023 respondents (n=50) *Providers allowed to select up to two responses*

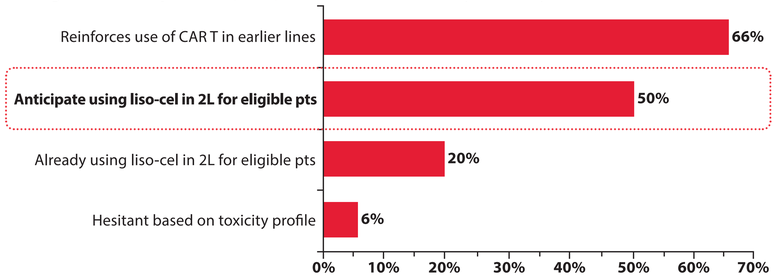


Figure 3. CAR T therapy preference for 2L therapy in a 60-year-old patient with R/R LBCL who failed 1L chemoimmunotherapy within 12 months, among June 2023 respondents (n=51)

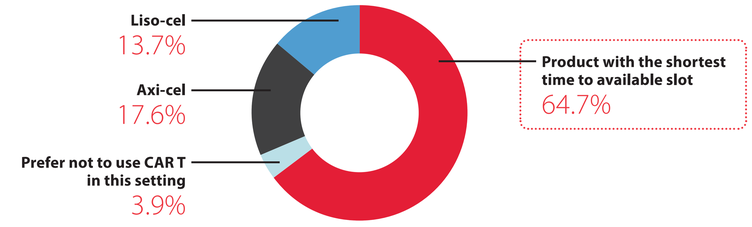
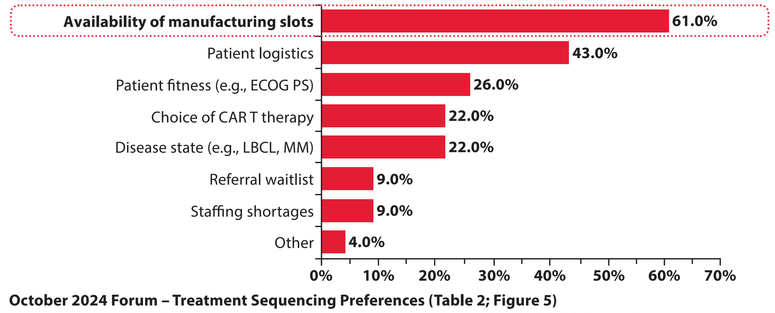


Figure 4. Factor(s) that most impact a patient's wait time for CAR T therapy, among June 2023 providers who participated in a breakout session (n=23) *Providers allowed to select up to two responses*



October 2024 Forum – Treatment Sequencing Preferences (Table 2; Figure 5)

- Approximately two thirds of respondents preferred CAR T therapy in 2L (31/47; 66.0%) as standard-of-care for patients with diffuse LBCL (DLBCL) who had relapsed within 12 months of 1L chemotherapy (**Table 2**)
- Given a hypothetical patient with DLBCL who progressed after 2L CAR T therapy, approximately half of respondents (28/47; 59.7%) preferred 3L treatment with bispecific antibody while 29.8% (14/47) preferred a polatuzumab-based regimen (**Table 2**)
- For a patient with DLBCL who relapsed within 12 months of 1L R-CHOP, the top selected treatment sequence (29/45; 64.4%) was CAR T therapy followed by bispecific antibody followed by ADC (**Figure 5**)

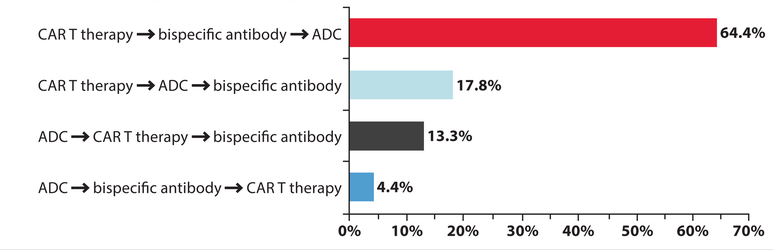
RESULTS

Table 2. Treatment preferences for CAR T therapy in R/R LBCL patients (October 2024 Forum)

	(N=52)*
Preferred standard-of-care for 2L therapy for patients with DLBCL who relapsed within 12 months of chemotherapy, n (%)	
CAR T therapy	31 (66.0)
Loncastuximab	3 (6.4)
Polatuzumab-based regimen	10 (21.3)
Tafasitamab-based regimen	2 (4.3)
Other	1 (2.1)
Preferred standard-of-care for 3L therapy for patients with DLBCL who progressed on CAR T therapy in 2L, n (%)	
Bispecific antibody	28 (59.7)
Loncastuximab	2 (4.3)
Polatuzumab-based regimen	14 (29.8)
Tafasitamab-based regimen	3 (6.4)

*Physicians were not required to answer every question; percentages were calculated with denominators for the number of respondents

Figure 5. Provider-reported "ideal" sequencing strategy for patients with DLBCL who relapsed within 12 months of receiving 1L R-CHOP, among October 2024 respondents (N=45)



DISCUSSION AND LIMITATIONS

- A year after the 2022 FDA approval of liso-cel in 2L for patients with R/R LBCL, approximately half of respondents had increased referrals for liso-cel by June 2023, highlighting a quick adoption into the LBCL treatment space. Similarly, oncologists in October 2024 incorporated both 2L CAR T therapy and recently approved bispecific antibodies into preferred treatment sequencing for DLBCL
- Respondents showed little preference between liso-cel and axi-cel in 2L CAR T therapy but instead preferred whichever had the quickest availability, with a breakout session further supporting a lack of timely manufacturing slots. This suggests a potential need for expanded CAR T infrastructure and/or improved accessibility to CAR T centers to correspond with increased CAR T referrals
- These results represent only the views of oncologists who participated and responded to in-person forum questions, which may not be representative of nationwide perspectives on treatment preferences for R/R LBCL. Additionally, although not specifically stated in the queries, it was assumed that CAR T therapy use and positioning was restricted to patients who would be eligible per label. This research also focused on recent therapeutic approvals and did not address HSCT options

CONCLUSIONS

- Oncologists were broadly receptive to and quick to incorporate CAR T therapy in earlier treatment settings for patients with R/R LBCL. Nevertheless, expansion of CAR T therapy infrastructure may be needed to keep pace with further label expansions

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