Treatment Preferences of Patients, Caregivers, and Physicians in Follicular Lymphoma: A Global Discrete-Choice Experiment Study

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CONCLUSIONS

- Efficacy is the most important attribute in FL treatment choice for patients, caregivers, and physicians
- Following efficacy, patients and caregivers prioritize convenience and reduced impact of AEs, while physicians prioritize safety over convenience
- Insights into differences in preferences between groups highlight the importance of informed discussion and a balanced, individualized approach to treatment selection
- Further prospective research is necessary to assess how shared decision-making influences adherence and clinical outcomes in FL, with the ultimate aim of optimizing patient care and guiding clinical practice

INTRODUCTION

- While recent advances in follicular lymphoma (FL) therapy offer options with varying levels of efficacy, safety, and convenience, data are limited on FL treatment preferences in the shared decision-making process
- A comprehensive survey with a discrete-choice experiment (DCE) design was conducted to assess preferences of patients, caregivers, and physicians for different attributes that impact treatment choice

METHODS

Data Source and Study Population

- A web-based DCE survey available in English and Spanish was completed in Oct-Nov 2024 by adult patients with FL, caregivers, and physicians of patients with FL recruited primarily in the US, the UK, Spain, and Australia through the Follicular Lymphoma Foundation (FLF)
- Participants were not compensated for completing the survey

Study Design

- The DCE survey was designed to assess preferences for different FL treatment options, in accordance with the recommendations of the International Society for Pharmacoeconomics and Outcomes Research Good Research Practices for Conjoint Analysis Task Force[1,2]
- FL treatment attributes were selected based on a targeted literature review and clinical inputs. The full survey was also reviewed by FLF-affiliated patient, caregiver, and physician advisors
  - DCE attributes included efficacy, safety and convenience (**Table 1**)
  - The impact of adverse events (AEs) on quality of life (QOL) during treatment was defined as the extent to which AEs interrupted patients' ability to engage in their usual day-to-day activities
- Based on the attributes and levels identified, DCE choice tasks were generated using a D-efficient design, a statistical method used to select combinations of attributes and levels that maximize the quality of data collected while minimizing the number of questions patients need to answer[2]
- The literature suggested 9-14 tasks per respondent as a reasonable range to balance the information collected and cognitive burden[3]
- Each patient completed 11 choice tasks in this study
  - Each choice task contained two hypothetical FL treatment profiles (treatment A and treatment B) with a varying combination of levels associated with each attribute (**Figure 1**)

Table 1. Attributes and Levels

Types of attributes	Attributes	Levels
Efficacy	Prevention of disease progression	2 years
		3 years
		4 years
Safety	Impact of fatigue on quality of life during treatment	None or mild
		Moderate
		Significant
	Impact of cytokine release syndrome on quality of life during treatment	None or mild
		Moderate
		Significant
	Impact of neurological events on quality of life during treatment	None or mild
		Moderate
		Significant
Convenience	Mode of administration	Oral tablet
		Oral tablet and IV infusions (outpatient only)
		IV infusions (outpatient only) + optional monitoring (possibly inpatient) for first doses
		Blood collection (apheresis) and IV infusion + required monitoring (likely inpatient) for first weeks
	Treatment duration and frequency of visits	Continuous with visits once every 3 months
		12 months with visits once monthly
		6 months with visits once weekly
		3 months with visits twice weekly
	Time needed to travel to treatment center	<30 minutes
		1-2 hours
		>2 hours (and/or requiring hotel stay or temporary relocation)

Abbreviations: IV, intravenous.

Figure 1. Example of a Choice Task[a]

Treatment Features	Treatment A	Treatment B
The treatment can prevent disease progression for...	3 years	2 years
Impact of fatigue on quality of life during treatment	None or mild	Moderate
Impact of cytokine release syndrome on quality of life during treatment	None or mild	Significant
Impact of neurological events on quality of life during treatment	None or mild	Significant
Mode of administration	IV infusions (outpatient only) + optional monitoring (possibly inpatient) for first doses	Blood collection (apheresis) and IV infusion + required monitoring (likely inpatient) for first weeks
Treatment duration and frequency of visits	12 months with once monthly visits	6 months with once weekly visits
Time needed to travel to treatment center	Less than 30 minutes	1-2 hours
Which treatment do you prefer?	○	○

[a]When a patient hovered over or clicked on an attribute (underlined in the figure), the description of the attribute was shown in a pop-up window.
Abbreviations: IV, intravenous.

- The importance of efficacy measures related to pausing the progression of cancer, increasing the chance of remission, and increasing life expectancy was further explored using responses rated on a scale of 0-10, with 0 indicating "not at all important" and 10 indicating "extremely important"

Statistical Analysis

- Continuous variables were reported using means, medians, and standard deviations; categorical variables were reported using frequency counts and percentages
- Participants' preference data collected from the DCE were analyzed using a conditional logistic regression model. Coefficients were used to calculate the relative importance of each attribute and willingness to trade off specific FL treatment attributes with efficacy

RESULTS

Sociodemographic and Clinical Characteristics

- A total of 337 patients, 37 caregivers, and 29 physicians (median age: 59, 45, and 51 years, respectively) from 25 countries (>75% from US, UK, and Spain) responded to the DCE survey (**Tables 2** and **3**)
- Most patients (68%) were diagnosed ≥2 years earlier, with 40% diagnosed ≥5 years earlier
  - Among caregivers, the majority (70%) cared for patients who were diagnosed ≥2 years previously and 32% for patients diagnosed ≥5 years previously
- Over half of patients (54%) and patients under caregivers' care (57%) received first-line treatment
  - Second-line treatment was reported for 16% of patients and 8% of caregiver-reported patients, while 10% and 11% received third-line or further treatment, respectively
  - A smaller proportion were treatment-naive, including 20% of patients and 24% of those cared for by caregivers (**Table 2**)
- The majority (94%) of patients reported having experienced ≥1 AE from previous treatment (**Table 2**)
- The majority of physicians practiced in urban areas (66%), followed by suburban (28%) and rural areas (7%); most practiced in academic settings (83%) (**Table 3**)

Table 2. Demographic and Clinical Characteristics of Patients and Caregivers

	Patients (n=337)	Caregivers (n=37)
Age, mean ± SD [median], years	57.5 ± 10.4 [59.0]	48.4 ± 12.4 [45.0]
Female, n (%)[a]	237 (70.3)	23 (62.2)
Country of residence, n (%)		
Spain	119 (35.3)	13 (35.1)
United States	95 (28.2)	8 (21.6)
United Kingdom	59 (17.5)	6 (16.2)
Australia	26 (7.7)	1 (2.7)
Other	38 (11.3)	9 (24.3)
Residential area, n (%)		
Suburban	151 (44.8)	17 (45.9)
Urban	105 (31.2)	12 (32.4)
Rural	81 (24.0)	8 (21.6)
Race/ethnicity, n (%)[b]	n=95	n=8
White or Caucasian	91 (95.8)	8 (100.0)
Asian or Pacific Islander	3 (3.2)	0 (0.0)
Black or African American	1 (1.1)	0 (0.0)
Non-Hispanic ethnicity, n (%)[b]	89 (93.7)	7 (87.5)
Employment status, n (%)		
Employed (full-time, part-time, self-employed)	188 (55.8)	28 (75.7)
Unemployed	22 (6.5)	1 (2.7)
Retired	97 (28.8)	4 (10.8)
Other[c]	41 (12.1)	4 (10.8)
Time since diagnosis, n (%)		
<1 year	56 (16.6)	10 (27.0)
1 to <2 years	51 (15.1)	1 (2.7)
2 to <5 years	95 (28.2)	14 (37.8)
≥5 or more years	135 (40.1)	12 (32.4)
Treatment experience, n (%)		
Treatment-naive	66 (19.6)	9 (24.3)
First-line	181 (53.7)	21 (56.8)
Second-line and later	70 (26.7)	7 (18.9)
Side effects experienced from treatment, n (%)[d]	n=271	n=28
≥1 side effect	254 (93.7)	27 (96.4)

[a]Response categories do not add up to 100% because the proportion of patients who selected "Prefer not to answer" is not presented in the table. [b]Only participants who lived in the US were asked the question. [c]"Other" includes full-time domestic responsibilities, disability, and student. [d]Only patients with FL and caregivers of patients with FL who had received ≥1 treatment were asked the question.
Abbreviations: FL, follicular lymphoma; SD, standard deviation.

Table 3. Demographic and Treatment Characteristics for Physicians

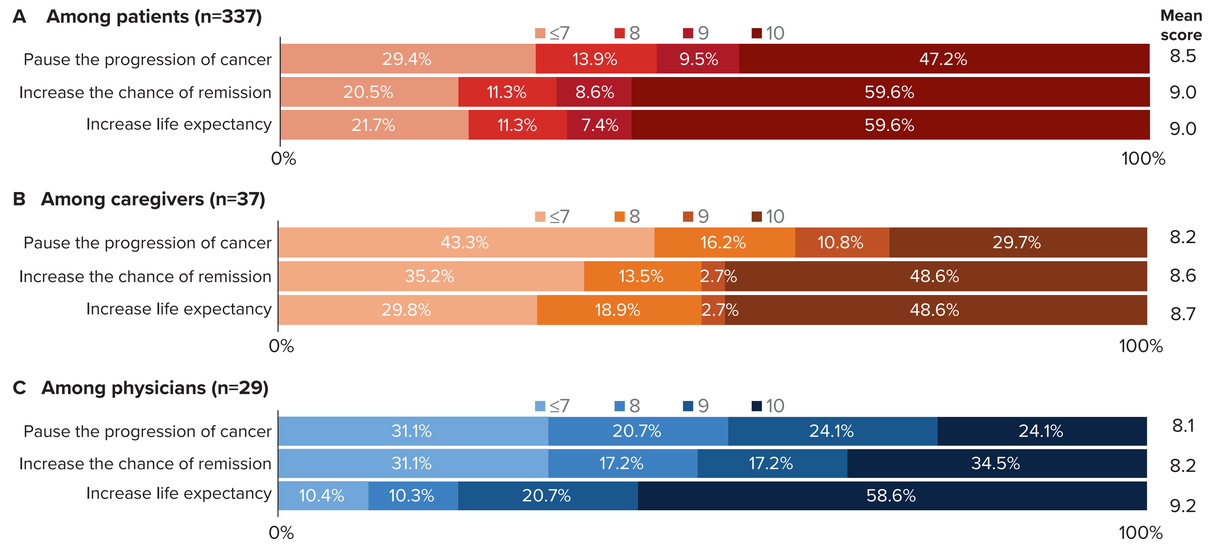
	Physicians (n=29)
Age, mean ± SD [median], years	52.9 ± 12.7 [51.0]
Female, n (%)	13 (44.8)
Country of residence, n (%)	
United States	18 (62.1)
Spain	4 (13.8)
United Kingdom	4 (13.8)
Other countries	3 (17.2)
Race/ethnicity, n (%)[a,b]	n=18
White or Caucasian	14 (77.8)
Asian or Pacific Islander	5 (27.8)
Non-Hispanic ethnicity, n (%)[b]	18 (100.0)
Primary practice area, n (%)	
Urban	19 (65.5)
Suburban	8 (27.6)
Rural	2 (6.9)
Type of primary practice setting, n (%)	
Academic	24 (82.8)
Community	5 (17.2)
Number of patients with FL treated in the past year, n (%)	
0-10	11 (37.9)
11-50	12 (41.4)
≥51	6 (20.7)

[a]Categories were not mutually exclusive. [b]Only participants who lived in the US were asked the question.
Abbreviations: FL, follicular lymphoma; SD, standard deviation.

Treatment Selection Preference

- Patients' primary considerations in treatment selection were to increase life expectancy and to increase the chance of remission (both with a mean of 9.0 of 10 and similar standard deviation), followed by pausing the progression of cancer (mean of 8.5 of 10)
- Caregiver ratings were consistent with those of patients: Life expectancy and remission were prioritized over pausing of cancer progression (mean of 8.7, 8.6, and 8.2, respectively)
- Physicians had a stronger preference for life expectancy over increasing chance of remission and pausing progression of cancer (mean of 9.2, 8.2, and 8.1, respectively) (**Figure 2**)

Figure 2. Importance of Efficacy Measures[a]

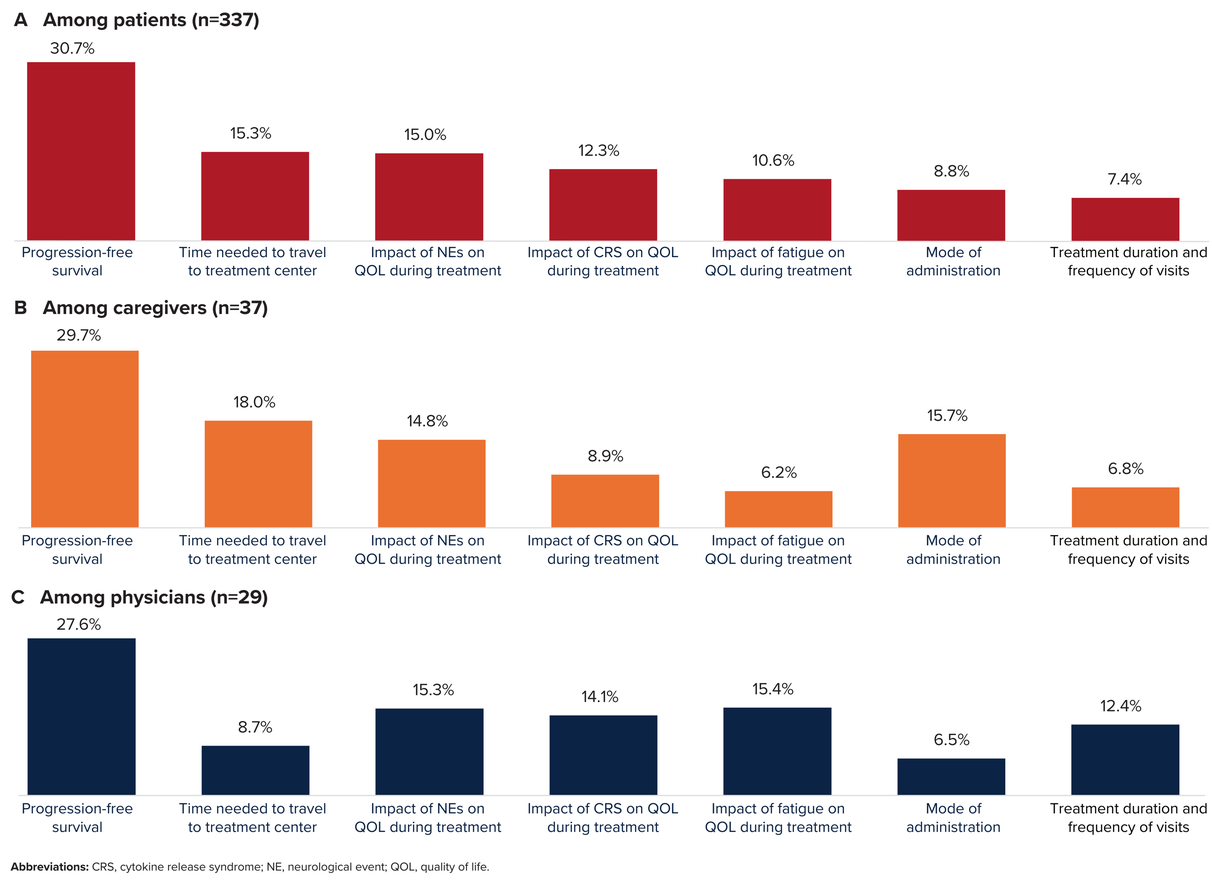


[a]Participants were asked to rate the importance of each efficacy measure in their decision to select a treatment on a scale of 0-10, with 0 indicating "not at all important" and 10 indicating "extremely important." The bar plot displays the percentage of respondents who rated each efficacy measure as ≤7, 8, 9, and 10. The mean score for each efficacy measure was calculated.

DCE Results for Treatment Preference

- Patients preferred treatments with longer progression-free survival (PFS); less impact of AEs on QOL; and more convenient treatment options (**Figure 3**)
  - PFS was ranked as the most important attribute by patients, caregivers, and physicians (31%, 30%, and 28%, respectively)
  - Following efficacy, patients and caregivers placed greater importance on treatment convenience attributes, whereas safety attributes were more important to physicians
  - Regarding safety attributes, patients and caregivers placed greater importance on the impact of NEs on QOL compared with CRS and fatigue, whereas physicians valued the overall impact of AEs on patients' QOL, assigning similar importance scores across AEs (14%-15%)

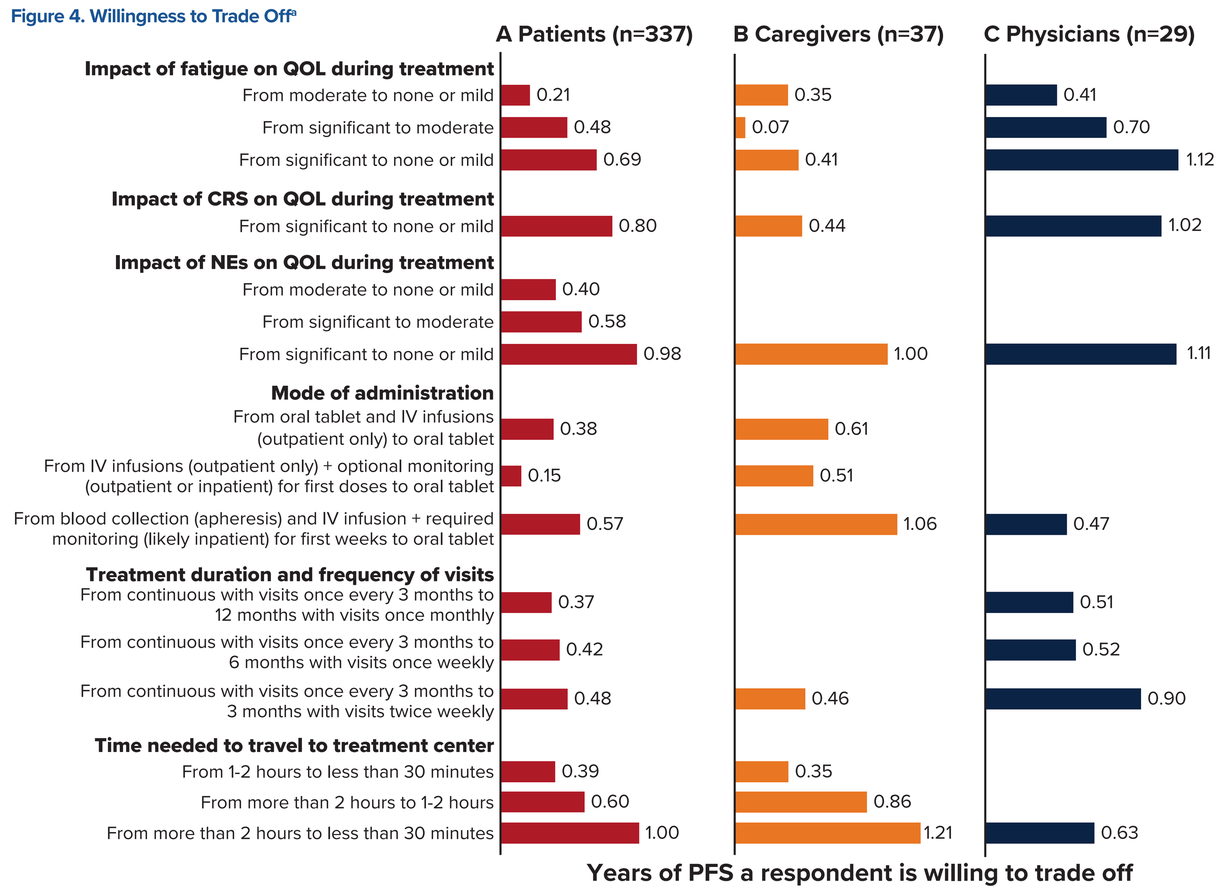
Figure 3. Relative Attribute Importance



Abbreviations: CRS, cytokine release syndrome; NE, neurological event; QOL, quality of life.

- Patients and caregivers were willing to trade off PFS for more convenient treatment options (**Figure 4**)
  - Specifically, they would accept a 1-1.2 year reduction in PFS for treatment requiring <30 minutes of travel vs >2 hours and a 0.6-1.1 year reduction for oral tablets vs treatment involving blood collection (apheresis) and IV infusion
- Physicians and patients were willing to trade off PFS for safer treatment options. Specifically, they would accept 0.7-1.1 years of reduction in PFS for treatments with less impact of AEs on QOL

Figure 4. Willingness to Trade Off[a]



[a]Results are only shown for levels at which willingness to trade off was derived from a statistically significant result.
Abbreviations: CRS, cytokine release syndrome; IV, intravenous; NE, neurological event; PFS, progression-free survival; QOL, quality of life.

DISCUSSION

- The study identified different perspectives of patients, caregivers, and physicians, highlighting the importance of physicians to consider both patients and caregiver preferences in the shared decision-making process
- While the study aimed for broad representation by recruiting globally, the generalizability of study findings may be limited by relatively smaller sample sizes of caregivers and physicians, or if the treatment preferences of respondents differed from those not in FLF network, or if they did not participate in the survey
- To minimize participant's response burden, the DCE included seven attributes following literature recommendations[4]; unassessed attributes may also impact preferences

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