realMIND: A prospective, multicenter, observational study of patients with relapsed/refractory diffuse large B-cell lymphoma starting second-/third-line therapy and not receiving a stem cell transplant

Christopher R. Flowers,[1] John M. Burke,[2] Mirko Vukcevic,[3] Susan Snodgrass,[4] Kim Saverno,[4] Mary Ann A. Lumiqued,[3] Haifaa Abdulhaq,[5] Elizabeth Brem,[6] Andrew M. Evens,[7] Umar Farooq,[8] Pierluigi Porcu,[9] Mazyar Shadman[10]

[1]Department of Lymphoma/Myeloma, Division of Cancer Medicine, The University of Texas MD Anderson Cancer Center, Houston, Texas, USA; [2]US Oncology Hematology Research Program, Rocky Mountain Cancer Centers, Aurora, Colorado, USA; [3]MorphoSys AG, Planegg, Germany; [4]Incyte Corporation, Wilmington, Delaware, USA; [5]University of California San Francisco, Fresno/Community Cancer Institute, Clovis, California, USA; [6]UCI Health Irvine, Irvine, California, USA; [7]Rutgers Cancer Institute of New Jersey, New Brunswick, New Jersey, USA; [8]University of Iowa Hospitals & Clinics, Iowa City, Iowa, USA; [9]Thomas Jefferson University, Philadelphia, Pennsylvania, USA; [10]Fred Hutchinson Cancer Research Center Seattle, Washington, USA

SOHO September 28–October 1, 2022: Poster number ABCL-051

Background

- Up to 40% of patients with diffuse large B-cell lymphoma (DLBCL) relapse or are refractory (R/R) to first-line (1L) treatment with rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone (R-CHOP)[1,2]
- The treatment landscape for R/R DLBCL is rapidly changing, with a lack of real-world evidence for recently approved treatment options for patients ineligible for autologous stem cell transplant (ASCT)
- Treatment options in the R/R setting for patients who are ineligible for ASCT include:[3]
  - The chemotherapy-free CD19-directed immunotherapy tafasitamab plus lenalidomide
  - The antibody-drug conjugates polatuzumab (plus bendamustine and rituximab; anti-CD79b antibody) and loncastuximab tesirine (anti-CD19 antibody)
  - The chemotherapy combination gemcitabine plus oxaliplatin, with or without rituximab
- Sequencing the treatment options for R/R DLBCL and identifying the optimal choice of treatment for individual patients can be challenging for oncologists

Objective

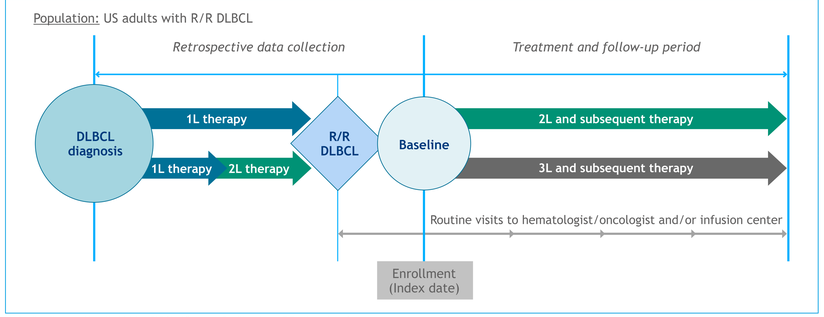
- realMIND (NCT04981795) aims to assess real-world treatment patterns, clinical and patient-reported outcomes (PROs), and healthcare resource utilization among US patients with R/R DLBCL not receiving ASCT

Methods

Study design

- realMIND is an ongoing Phase IV, prospective, non-interventional, real-world study, aiming to recruit approximately 1,000 patients from 75 US sites (**Figure 1**)
  - As a non-hypothesis-driven observational study, all analyses will be exploratory and considered hypothesis generating
  - No formal sample size calculations were performed due to the descriptive nature of the study
- The study will end when all the patients have completed at least 24 months of follow-up or have discontinued from the study for any reason, whichever happens earlier
- Sites are being recruited across the US with the intent of enrolling a diverse patient population representative of the underlying US population with R/R DLBCL regarding age, ethnicity, and race
  - Community based sites: approximately 70%
  - Academic sites: approximately 30%

Figure 1. Study design



1L, first-line; 2L, second-line; 3L, third-line; DLBCL, diffuse large B-cell lymphoma; R/R, relapsed or refractory.

- Patients will be evaluated and treated according to the physician's usual practice and discretion
  - No specific treatments, visits, procedures, or assessments are mandated by the study protocol
  - Patients will be followed per routine clinical practice until withdrawal, study termination, resolution of serious adverse events leading to study discontinuation, or death, whichever occurs first

Eligibility criteria

- Patient inclusion and exclusion criteria are intentionally broad to minimize the possibility of selection bias and ensure a cohort that is representative of all patients diagnosed with R/R DLBCL in the US (**Table 1**)

Table 1. Key eligibility criteria

Inclusion criteria	Exclusion criteria
• Age ≥18 years at the time of diagnosis of R/R DLBCL • Histologically confirmed diagnosis of DLBCL according to WHO classification, including DHL and THL • R/R DLBCL status after at least one prior systemic therapy (can include ASCT) • Eligible patients or candidates for ASCT may be enrolled in the study if not receiving ASCT at the time of study enrollment, even if they may plan to receive it in the future • Availability of data on previous treatment lines	• Participation in an interventional clinical trial • Receiving ASCT • If patients' response to salvage therapy is already known and the decision has been made to begin ASCT (i.e. receiving high-dose conditioning therapy), they are no longer eligible for participation in realMIND (note: having received ASCT in the past is not an exclusion criterion)

ASCT, autologous stem cell transplant; DHL, double-hit lymphoma; DLBCL, diffuse large B-cell lymphoma; R/R, relapsed/refractory; THL, triple-hit lymphoma; WHO, World Health Organization.

Enrollment

- Patients may be enrolled:
  - After completing 1L therapy and before initiating second-line (2L) therapy
  - Within 30 days of initiating 2L therapy
  - After completing 2L and before initiating third-line (3L) therapy
- The index date for enrollment is defined as the date of DLBCL 2L or 3L therapy initiation
  - 1L and 2L treatment prior to enrollment may include stem cell transplant
- Patients will be followed for clinical efficacy and safety outcomes (**Table 2**)
  - Data will be collected prospectively from the index date onwards to observe treatment effectiveness and safety
  - All clinical data collected from patients will be extracted from medical records and entered in the electronic case report form (eCRF)
  - PROs will be collected directly from patients and no more frequently than once quarterly

Table 2. Study outcomes and endpoints

Outcomes	Endpoints
Primary outcome	
Treatment patterns of patients with R/R DLBCL in the US	• Frequency and percentage of treatment regimens used • Frequency and percentage of different regimen sequences • Treatment characteristics: — Line of therapy — Treatment regimen — Treatment dosage — Number of cycles planned and received — Duration of treatment — Time to next treatment — Treatment interruption/discontinuation — Use of maintenance treatment
Secondary outcomes	
Effectiveness	• Investigator-assessed response according to routine clinical practice will be used to estimate CR rate, DoR, ORR, EFS, and OS across patients
Safety	• AEs, SAEs • AEs leading to treatment discontinuation, interruption, or dose modification
Healthcare resource utilization	• Concomitant procedures: radiation therapy, supportive/palliative care, and other concomitant therapies • Hospitalizations and length of stay
Patient-reported outcomes	• EORTC QLQ-C30 • FACT-Lym • WPAI

AE, adverse event; CR, complete response; DLBCL, diffuse large B-cell lymphoma; DoR, duration of response; EORTC QLQ-C30, European Organization for Research and Treatment of Cancer Quality of Life Questionnaire-Core 30; EFS, event-free survival; FACT-Lym, Functional Assessment of Chronic Illness Therapy-Lymphoma; ORR, objective response rate; OS, overall survival; R/R, relapsed or refractory; SAE, serious adverse event; WPAI, Work Productivity and Activity Impairment Questionnaire; US, United States.

- Baseline patient characteristics and study outcome measures will be summarized using descriptive statistics
  - Stratification will be considered according to patient/disease characteristics, line of therapy, and treatment decisions
- The study will end when all patients have completed at least 24 months of follow-up or have discontinued the study for any reason, whichever occurs first
- Interim analyses will be conducted approximately every 12 months until the end of the study

Summary

- realMIND is an ongoing Phase IV, prospective, non-interventional, real-world study aiming to recruit approximately 1,000 patients with R/R DLBCL not eligible for ASCT, from approximately 75 sites across the US
- Data from realMIND will provide further understanding and characterization of the R/R DLBCL patient journey with respect to treatment patterns and clinical and patient-reported outcomes
- The study population aims to reflect a representative distribution of patients within the US, facilitating the investigation of outcomes in a patient population reflecting real-world clinical practice, and producing data to support healthcare decision-making

Acknowledgments

This study was funded by MorphoSys AG. Medical writing assistance was provided by Pavitra Joshi of Syneos Health, UK, and funded by MorphoSys AG.

Disclosures

About Tafasitamab

Tafasitamab is a humanized Fc-modified cytolytic CD19-targeting monoclonal antibody. In 2010, MorphoSys licensed exclusive worldwide rights to develop and commercialize tafasitamab from Xencor, Inc. Tafasitamab incorporates an XmAb® engineered Fc domain, which mediates B-cell lysis through apoptosis and immune effector mechanisms including antibody-dependent cell-mediated cytotoxicity (ADCC) and antibody-dependent cellular phagocytosis (ADCP). In January 2020, MorphoSys and Incyte entered into a collaboration and licensing agreement to further develop and commercialize tafasitamab globally. Following approval by the U.S. Food and Drug Administration in July 2020, tafasitamab is being co-commercialized by MorphoSys and Incyte in the United States. Conditional/accelerated approvals were granted by the European Medicines Agency and other regulatory authorities. Incyte has exclusive commercialization rights outside the United States. XmAb® is a registered trademark of Xencor, Inc.

Conflicts of interest

CRF: consulting/advisory: Bayer, Gilead Sciences, Spectrum Pharmaceuticals, AbbVie, Celgene, Denovo Biopharma, BeiGene, Karyopharm Therapeutics, Pharmacyclics/Janssen, Genentech/Roche, Epizyme; research funding: Acerta Pharma, Janssen Oncology, Gilead Sciences, Celgene, TG Therapeutics, Genentech/Roche, Pharmacyclics, AbbVie, Millennium, Alimera Sciences, Xencor. **JMB:** consulting/advisory: Genentech/Roche, AbbVie, Seattle Genetics, Bayer, AstraZeneca, Adaptive Biotechnologies, Verastem, MorphoSys AG, Kura Oncology, Epizyme, BeiGene, Kymera, Novartis, Bristol-Myers Squibb, TG Therapeutics, Lilly; speakers' bureau: Seattle Genetics, BeiGene. **MV:** employment: MorphoSys AG. **SS:** employment: Incyte Pharma; stock and other ownership interests: Incyte. **KS:** employment: Lilly, Incyte; stock and other ownership interests: Lilly, Incyte, Pfizer, Moderna Therapeutics. **MAL:** employment: MorphoSys AG; stock and other ownership interests: MorphoSys US. **HA:** consulting/advisory: Amgen, MorphoSys, Genentech, BMS, Novartis, Pfizer; speakers' bureau: Alexion, Amgen, Oncopeptide; research funding: MorphoSys. **EB:** consulting/advisory: Bayer, Pfizer, Celgene, Genentech, Janssen, Pharmacyclics, Celgene, Sanofi, MorphoSys, Karyopharm Therapeutics, Kite, a Gilead company, TG Therapeutics; speakers' bureau: Celgene, Pharmacyclics, BeiGene, MorphoSys, Seattle Genetics; research funding: Viracta Therapeutics, AstraZeneca, Genmab. **AME:** consulting/advisory: Novartis, AbbVie, Pharmacyclics, Seattle Genetics, Hutchmed, Incyte, Daiichi Sankyo, Epizyme; Curio, Cota, Patient Power, Curio Science, OncLive, Research to Practice; grant/research support: ORIEN, Leukemia & Lymphoma Society. **UF:** consulting/advisory: Kite, Caribou, MorphoSys; research funding: Checkmate; **PP:** honoraria: Kyowa, Daiichi, Viracta, Dren Bio, Innate Pharma; consulting/advisory: Kyowa, Daiichi, Viracta, Dren Bio, Innate Pharma. **MS:** consulting/advisory, steering/data safety monitoring committees: AbbVie, Genentech, AstraZeneca, Sound Biologics, Pharmacyclics, BeiGene, Bristol Myers Squibb, MorphoSys/Incyte, TG Therapeutics, Innate Pharma, Kite Pharma, Adaptive Biotechnologies, Epizyme, Eli Lilly, Adaptimmune, Mustang Bio, Regeneron, Merck, Fate therapeutics, MEI pharma, Atara Biotherapeutics; research funding: Mustang Bio, Celgene, Bristol Myers Squibb, Pharmacyclics, Gilead, Genentech, AbbVie, TG Therapeutics, BeiGene, AstraZeneca, Sunesis, Atara Biotherapeutics, Genmab, MorphoSys/Incyte.

References

1. Sehn LH, Salles G. N Engl J Med 2021;384(9):842–58.
2. Sarkozy C, Sehn LH. Ann Lymphoma 2019;3:10.
3. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for B-Cell Lymphomas V.5.2022. ©National Comprehensive Cancer Network, Inc. 2022. All rights reserved. Accessed July 18, 2022. To view the most recent and complete version of the guideline, go online to NCCN.org. NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way.

Scan the QR code to download a PDF of this poster

Correspondence: Dr. Christopher Flowers (CRFlowers@mdanderson.org)