

Tafasitamab

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University Hospital of Würzburg

New Drugs in Hematology
Bologna January 2024



DISCLOSURES OF COMMERCIAL SUPPORT

Name of Company	Research support	Employee	Consultant	Stockholder	Speaker's Bureau	Scientific Advisory Board	Other
Regeneron	x						
Morphosys			x			x	
Incyte	x					x	

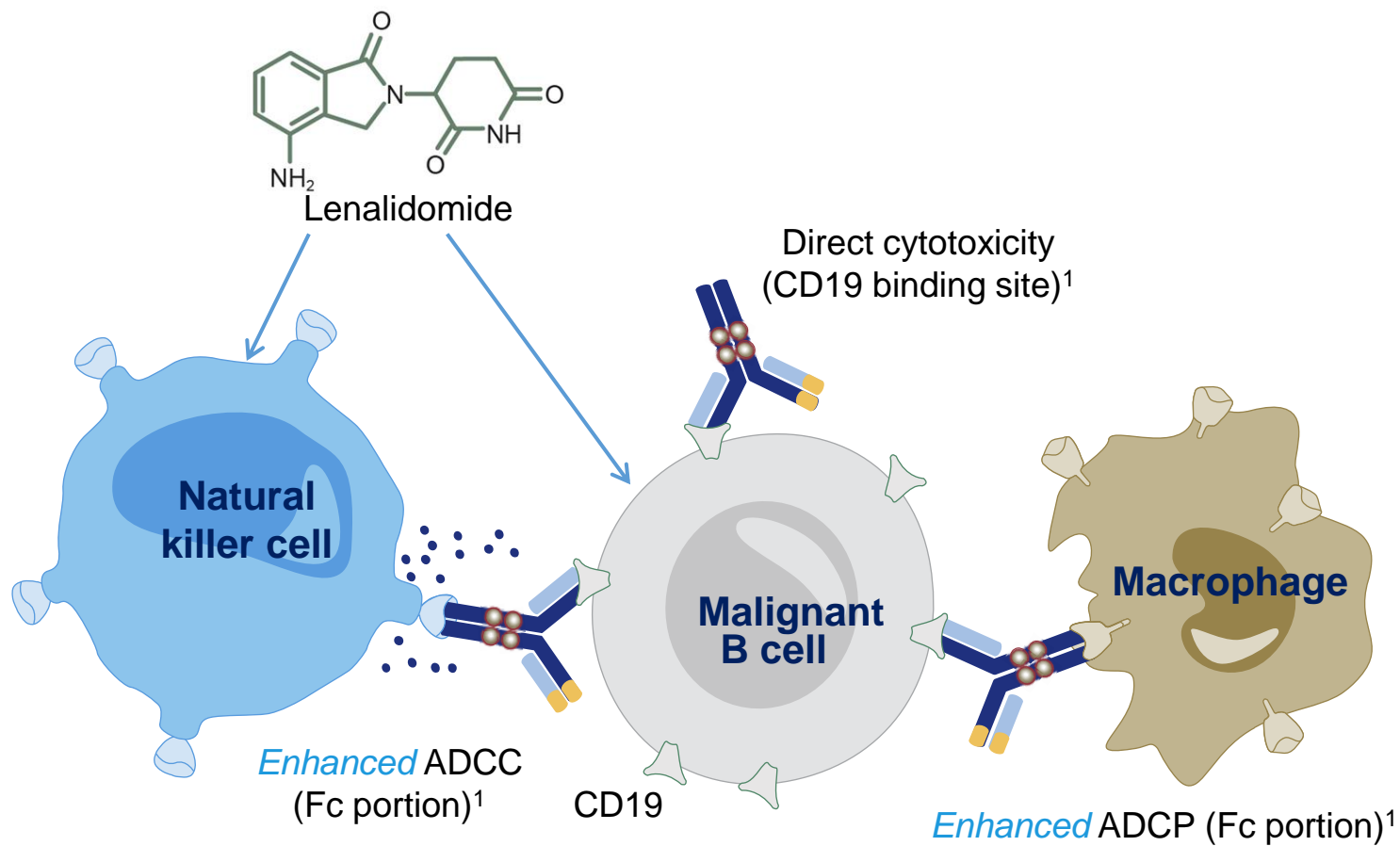
Overview

- Tafasitamab mode of action and clinical data
- Tafasitamab real world
- Tafasitamab experience including CD19 therapie sequencing

Overview

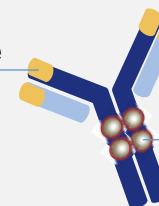
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Tafasitamab mode of action



Tafasitamab (Fc-modified, anti-CD19 mAb)¹⁻⁴

Affinity-matured CD19 binding site



Modified Fc portion

- ADCC ↑
- ADPCP ↑
- Direct cell death
- Encouraging single-agent activity in patients with R/R DLBCL and iNHL

Lenalidomide^{5,6}

- T-cell and NK-cell activation/expansion
- Direct cell death
- Well-studied as an anti-lymphoma agent, alone or in combination

• ADCC, antibody-dependent cellular cytotoxicity; ADPCP, antibody-dependent cellular phagocytosis; iNHL, indolent non-Hodgkin's lymphoma.

• 1. Horton HM, et al. *Cancer Res.* 2008;68:8049–57; 2. Woyach JA, et al. *Blood.* 2014;124:3553–60; 3. Jurczak W, et al. *Ann Oncol.* 2018;29:1266–72; 4. Awan FT, et al. *Blood.* 2010;115:1204–13; 5. Witzig TE, et al. *Ann Oncol.* 2015;26:1667–77; 6. Czuczman MS, et al. *Clin Cancer Res.* 2017;23:4127–37.

Clinical data

Five-year efficacy and safety of tafasitamab in patients with relapsed or refractory DLBCL:

Final results from the Phase II L-MIND study

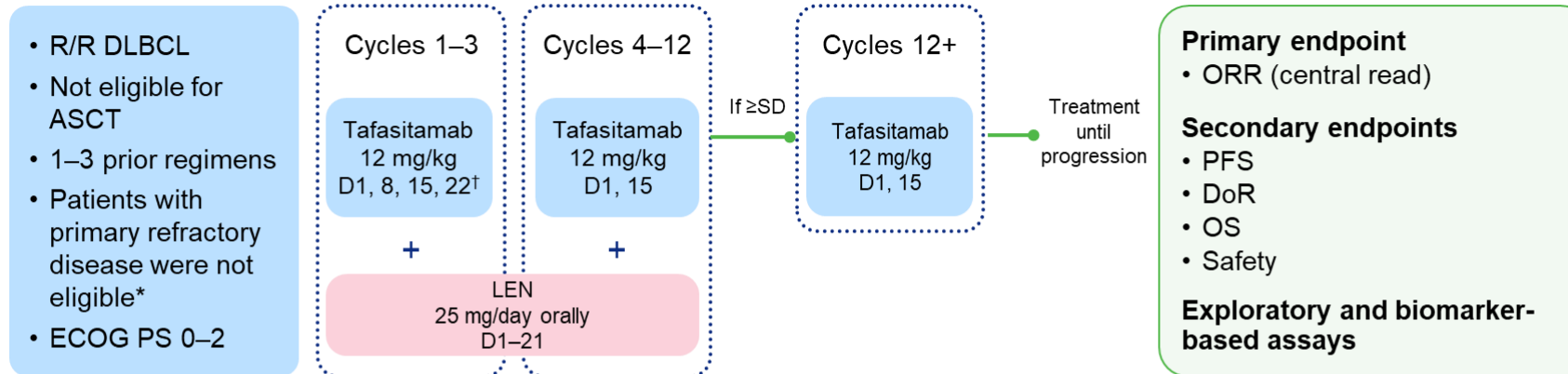
Johannes Duell,^{1*} Pau Abrisqueta,² Marc Andre,³ Marinela Augustin,⁴ Gianluca Gaidano,⁵ Eva González Barca,⁶ Wojciech Jurczak,⁷ Nagesh Kalakonda,⁸ Anna Marina Liberati,⁹ Kami J Maddocks,¹⁰ Tobias Menne,¹¹ Zsolt Nagy,¹² Olivier Tournilhac,¹³ Abhishek Bakuli,¹⁴ Aasim Amin,¹⁴ Konstantin Gurbanov,¹⁴ Gilles Salles¹⁵

¹Medizinische Klinik und Poliklinik II, Universitätsklinik Würzburg, Würzburg, Germany; ²Department of Hematology, Vall d'Hebron Institute of Oncology (VHIO), Vall d'Hebron University Hospital, Barcelona, Spain; ³Department of Hematology, CHU UCL Namur, Yvoir, Belgium; ⁴Department of Hematology and Oncology, Klinikum Nuernberg, Paracelsus Medical University, Nuernberg, Germany; ⁵Division of Hematology, Department of Translational Medicine, University of Eastern Piedmont, Novara, Italy; ⁶Institut Català d'Oncologia, Hospital Duran i Reynals, IDIBELL, Universitat de Barcelona, Barcelona, Spain; ⁷Department of Clinical Oncology, Maria Sklodowska-Curie National Research Institute of Oncology, Kraków, Poland; ⁸Department of Molecular and Clinical Cancer University of Liverpool, Liverpool, United Kingdom; ⁹Università degli Studi di Perugia, Azienda Ospedaliera Santa Maria di Terni, Terni, Italy; ¹⁰Department of Internal Medicine, Arthur G James Comprehensive Cancer Center, Ohio State University Wexner Medical Center, Columbus, OH, USA; ¹¹Freeman Hospital, The Newcastle upon Tyne Hospitals, Newcastle upon Tyne, UK; ¹²Semmelweis University, Budapest, Hungary; ¹³CHU de Clermont-Ferrand, Clermont Ferrand, France; ¹⁴MorphoSys AG, Planegg, Germany; ¹⁵Department of Medicine, Memorial Sloan Kettering Cancer Center, New York, NY, USA.

Clinical data

L-MIND: Study Design

Open-label, single-arm, multicenter, global, Phase II study; **N=81**



NCT02399085¹

*Primary refractory is defined as no response to, or progression/relapse during/within 6 months of, front-line therapy; 15 patients with refractory disease were included under an early version of the protocol.

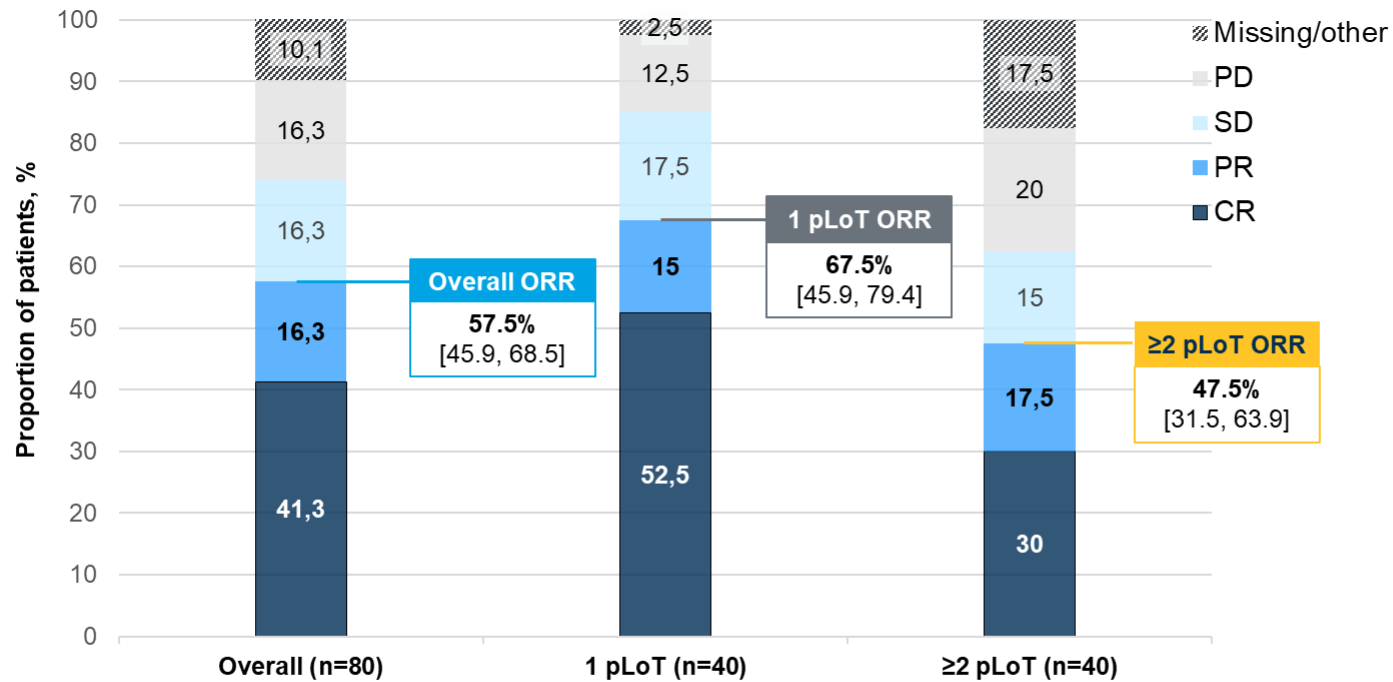
[†]A loading dose of tafasitamab was administered on Day 4 of Cycle 1.

ASCT, autologous stem cell transplantation; D, days; DLBCL, diffuse large B-cell lymphoma; DoR, duration of response; ECOG PS, Eastern Cooperative Oncology Group performance status; HDC, high-dose chemotherapy; LEN, lenalidomide; ORR, objective response rate; OS, overall survival; PFS, progression-free survival; R/R, relapsed or refractory; SD, stable disease.

1. ClinicalTrials.gov [NCT02399085](https://clinicaltrials.gov/ct2/show/study/NCT02399085) (accessed Apr 2023).

Clinical data

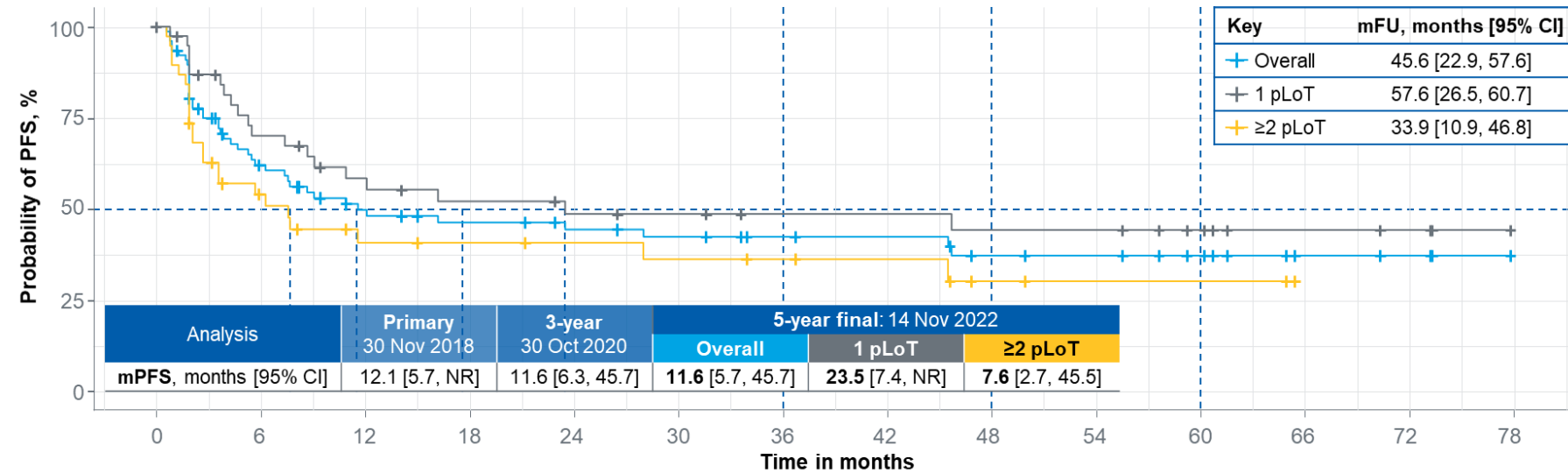
Efficacy Results: Best Response at 5-year Follow-up



CR, complete response; ORR, objective response rate; PD, progressive disease; pLoT, prior line of therapy; PR, partial response; SD, stable disease.

Clinical data

Efficacy Results: PFS at 5-year Follow-up



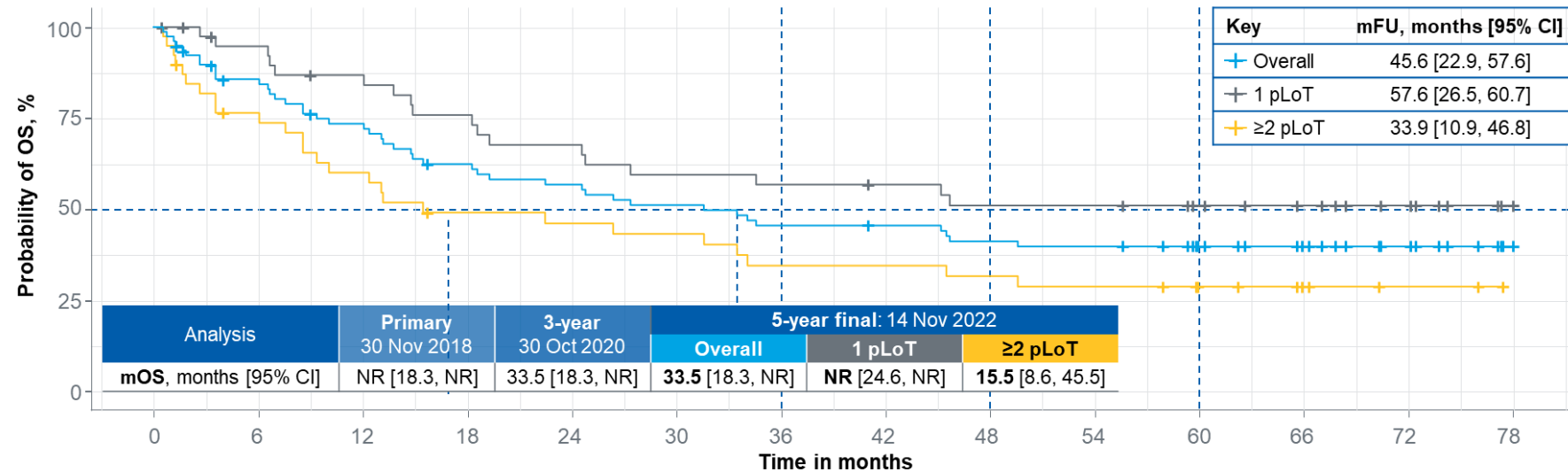
Number at risk:

	0	6	12	18	24	30	36	42	48	54	60	66	72	78
Overall	80	42	30	26	23	21	18	17	13	12	9	4	3	0
1 pLoT	40	25	19	16	14	13	11	11	10	10	7	4	3	0
≥2 pLoT	40	17	11	10	9	8	7	6	3	2	2	0	0	0

mFU, median follow-up; mPFS, median PFS; NR, not reached; PFS, progression-free survival; pLoT, prior line of therapy.

Clinical data

Efficacy Results: OS at 5-year Follow-up



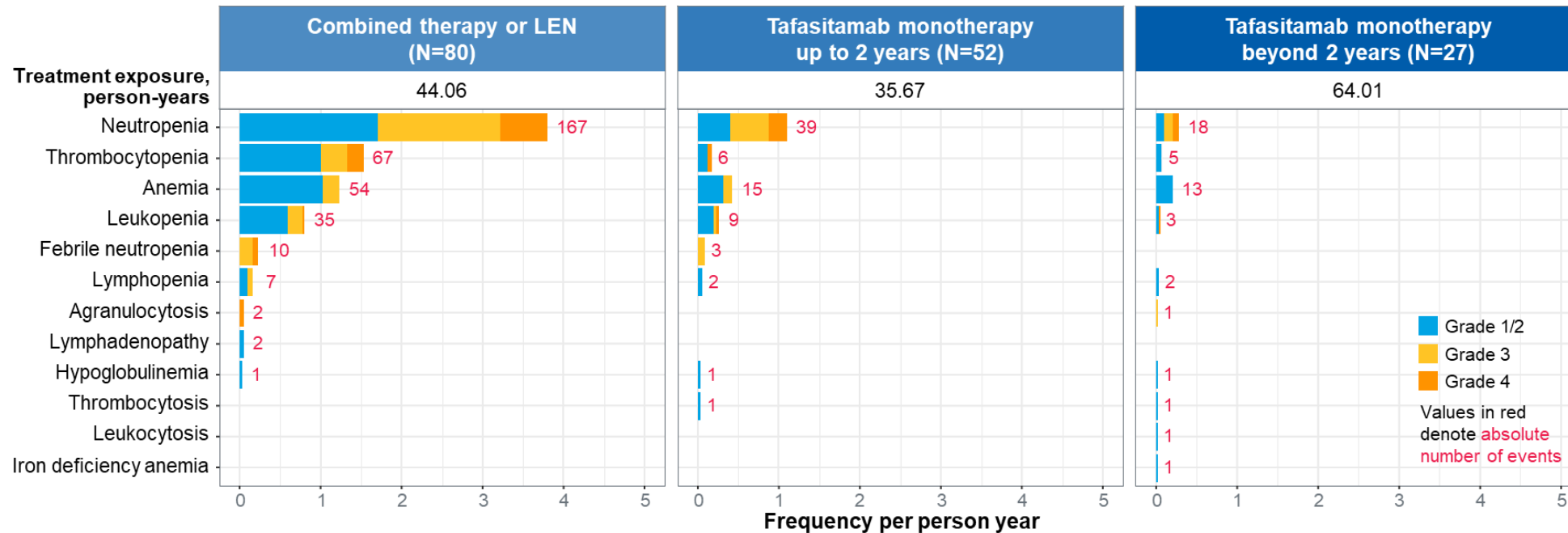
Number at risk:

	0	6	12	18	24	30	36	42	48	54	60	66	72	78
Overall	80	64	54	45	41	37	33	32	29	28	21	15	9	1
1 pLoT	40	36	32	28	25	22	21	20	18	18	14	11	7	1
≥2 pLoT	40	28	22	17	16	15	12	12	11	10	7	4	2	0

mFU, median follow-up; mOS, median OS; NR, not reached; OS, overall survival; pLoT, prior line of therapy.

Clinical data

Hematological TEAEs



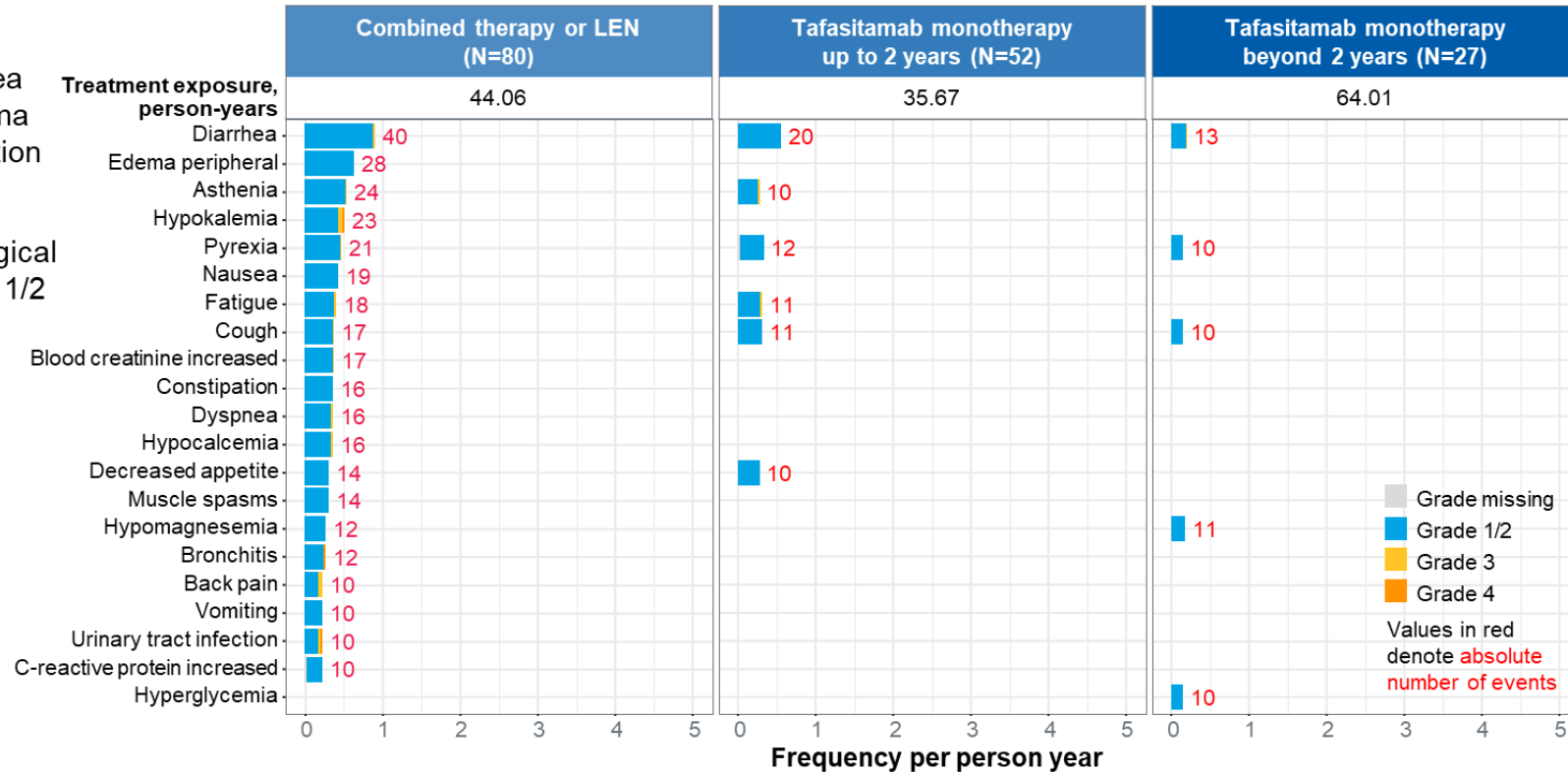
- Hematological TEAEs were less frequent during tafasitamab monotherapy compared with tafasitamab + LEN combination therapy
- The low incidence of TEAEs with tafasitamab monotherapy up to 2 years was maintained or further reduced from 2 years onwards

CTCAE grading system.
LEN, lenalidomide; TEAE, treatment-emergent adverse event.

Clinical data

Non-hematological TEAEs (cut-off: ≥ 10 events in any treatment period)

- The most common TEAEs were diarrhea and peripheral edema during the combination therapy phase
- Most non-hematological TEAEs were Grade 1/2



CTCAE grading system.
 LEN, lenalidomide; TEAE, treatment-emergent adverse event.

Duell J, et al. AACR 2023. Abstract 9810.

Clinical data

Conclusions

- The **5-year analysis of Phase II L-MIND** study showed **durable responses** in patients with R/R DLBCL who are not eligible for ASCT
 - **Median DoR was not reached** after 44 months of median follow-up
 - As expected, patients with **1 pLoT** had better outcomes than those with **≥2 pLoT**
 - **mDoR was not reached in either subgroup** indicating durability of response irrespective of treatment line
- The frequency of **TEAEs decreased** after **patients transitioned** from combination therapy to tafasitamab monotherapy, up to 2 years (previous analysis) and further beyond 2 years
- **No new safety signals** were identified, confirming the tolerable safety profile seen with earlier data cuts
- These long-term data suggest that **this immunotherapy may have curative potential**, which is being explored in further studies

Overview

- Tafasitamab mode of action and clinical data
- **Tafasitamab real world**
- Tafasitamab experience including CD19 therapie sequencing

TAFASITAMAB AND LENALIDOMIDE IN RELAPSED/REFRACTORY B-CELL LYMPHOMA: A MULTICENTER RETROSPECTIVE REAL-WORLD-STUDY OF PATIENTS FROM GERMANY AND AUSTRIA

A. RUCKDESCHEL¹, S. KOEMM¹, MS TOPP¹, G. GELBRICH¹, R. GREIL², T. MELCHARDT², G. LENZ³, A. KERKHOFF³, E. SHUMILOV³, G. HER⁴, M. BAUMGAERTNER⁴, L. THURNER⁵, I. KOS⁵, S. MAYER⁶, F.A. AYUK⁷, R. KRAUSE⁷, M. HERLING⁸, V. VUCINIC⁸, C. CHAPUY⁹, M. KNOTT¹⁰, A. VIARDOT¹¹, A. GRUNENBERG¹¹, S. DIETRICH¹², L. CAILLE¹², M. TOMETTEN¹³, R. CHO¹³, S. SCHOLZ¹⁴, F. MUELLER¹⁴, K. PROCHAZKA¹⁵, B. CHAPUY¹⁶, D. BOECKLE¹⁶, B. VON TRESCKOW¹⁷, N. SCHUB¹⁸, H. EINSELE¹, J. DUELL¹¹

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¹University Hospital Frankfurt, Department of Hematology, Germany; ²Department of Hematology & Cell Transplantation, University Hospital Frankfurt, Germany; ³Department of Hematology, University Hospital Frankfurt, Germany; ⁴Department of Hematology, University Hospital Frankfurt, Germany; ⁵Department of Hematology, University Hospital Frankfurt, Germany; ⁶Department of Hematology, University Hospital Frankfurt, Germany; ⁷Department of Hematology, University Hospital Frankfurt, Germany; ⁸Department of Hematology, University Hospital Frankfurt, Germany; ⁹Department of Hematology, University Hospital Frankfurt, Germany; ¹⁰Department of Hematology, University Hospital Frankfurt, Germany; ¹¹Department of Hematology, University Hospital Frankfurt, Germany; ¹²Department of Hematology, University Hospital Frankfurt, Germany; ¹³Department of Hematology, University Hospital Frankfurt, Germany; ¹⁴Department of Hematology, University Hospital Frankfurt, Germany; ¹⁵Department of Hematology, University Hospital Frankfurt, Germany; ¹⁶Department of Hematology, University Hospital Frankfurt, Germany; ¹⁷Department of Hematology, University Hospital Frankfurt, Germany; ¹⁸Department of Hematology, University Hospital Frankfurt, Germany

BACKGROUND

The LAMPD study led to the approval of tafasitamab (Tf) in patients with relapsed or refractory diffuse large B-cell lymphoma (DLBCL) ineligible for autologous stem cell transplantation (ASCT).

The LAMPD study showed:

- Overall response rate (ORR) of 57.5%
- Complete response rate (CRR) of 41.3%
- Median progression free survival (PFS) of 12.1 months
- Median overall survival (OS) of 33.5 months

RESULTS

Table 1. Patient baseline characteristics

Characteristic	n (%)
Median age, y (range)	73 (25-84)
Male (%)	69 (54)
Female (%)	58 (44)
IP at primary diagnosis (n, n/total)	46/70 (65.7/100.0)
LDH at baseline, elevated (n/total)	6/22 (27.3/100.0)
Treatment lines prior to Tf, n (%)	5/68 (73.5/100.0)
• prior 1 treatment line (%)	23 (33.8)
• prior 2 treatment lines (%)	34 (50.0)
• prior 3 treatment lines (%)	7 (10.2)
• prior ≥ 4 treatment lines (%)	4 (5.9)

Table 2. Pre- and post-Tf treatment

Characteristic	n (%)	n (%)
ORR	57.5	57.5
CRR	41.3	41.3
Median PFS (months)	12.1	12.1
Median OS (months)	33.5	33.5

CONCLUSIONS

We provide outcome estimates for Tf treatment in the real-world setting, which are slightly less optimistic than in a prospective phase 3 clinical trial (LAMPD). ORR, PFS and OS in the real-world setting were lower than estimated in the LAMPD phase 3 clinical trial. Tf seems to be more feasible for patients that don't show high-risk features. Concomitant, higher age, closer relapse, histologic type of cell malignancies after first DLBCL, concurrent lymphoma, the also-SCIT and the number of conventional lines (overall evaluation score of the LAMPD study) may partially add to the outcome data we observed in the real-world setting. The data suggests that Tf can still be used after CAR T therapy or as a bridging therapy to CAR T.

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TAFASITAMAB AND LENALIDOMIDE IN RELAPSED/REFRACTORY B-CELL LYMPHOMA: A MULTICENTER RETROSPECTIVE REAL-WORLD-STUDY OF PATIENTS FROM GERMANY AND AUSTRIA

- **Aim:** A multicenter retrospective study to examine real-world characteristics of patients treated with Tafasitamab and Lenalidomide (Tafa-Len)
 - Treated with Tafa-Len from 03/2020 until 07/2023
 - Median follow-up time of 10.1 months
- **Methods:** Retrospective analysis of 127 R/R DLBCL patients
 - 18 institutions, mainly academic hospitals, in Germany and Austria contributed patient data
 - Data included outcomes, demographics, diagnosis, prior therapies, adverse events (AEs) and post- Tafa-Len treatment
- **L-MIND study eligibility:** Only 37% of patients were L-MIND eligible, most common reasons for ineligibility were:
 - More than half of study population in 5L+
 - Prior anti-CD19 therapy (CAR T/ Bispecific Antibody) and/or IMiDs
 - Primary refractory disease/ other diagnosis (e.g. High-Grade-BCL)

TAFASITAMAB AND LENALIDOMIDE IN RELAPSED/REFRACTORY B-CELL LYMPHOMA: A MULTICENTER RETROSPECTIVE REAL-WORLD-STUDY OF PATIENTS FROM GERMANY AND AUSTRIA

Summary of patient baseline characteristics (n=127)

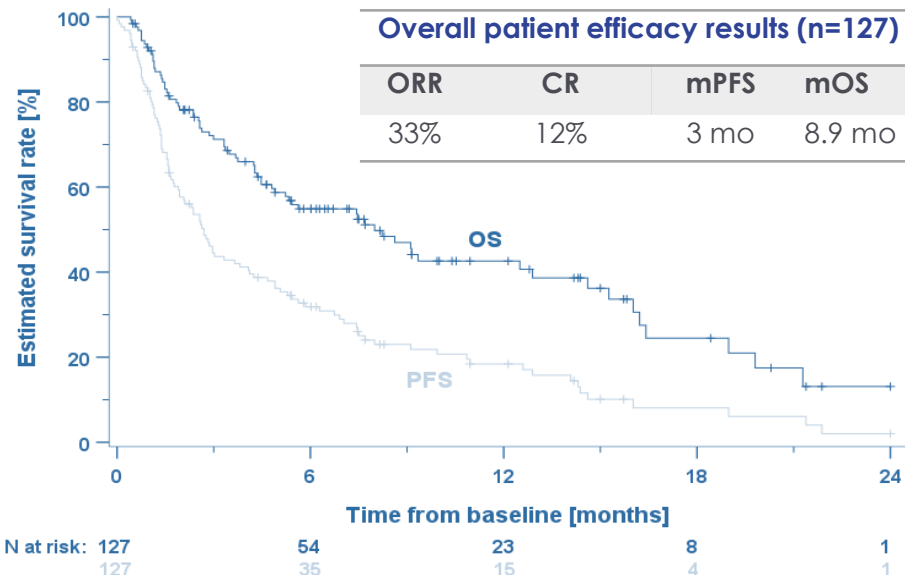
Median age in years (range)	73 (29-89)
IPI ≥3 at primary diagnosis	55%
Elevated LDH at initiation of Tafa-Len	74%
≥ 4 prior lines of therapy [†]	52%
Prior Anti-CD19 CAR T/ BITE [†]	19%
Other diagnosis than DLBCL (e.g. HGBCL) [†]	13%

Subgroup analysis

Characteristics	Baseline	Effect estimate	HR OS	HR PFS
Age [years]	Median: 73	per +10 years	1.01	0.97
Female sex	46%	vs. male	1.10	0.88
IPI score at diagnosis >2	55%	vs. ≤2	1.81	1.42
Primary refractory[†]	43%	vs. relapse	2.57**	2.79**
Prior CAR T treatment	18%	yes vs. no	0.88	0.86
Number of prior treatment lines	Median: 3	per +1 line	1.18*	1.13

* P<0.05, ** P<0.001, IPI scores were missing for n=11 (9%)

[†]Exclusion criteria for L-MIND



(figures and tables adapted from) Ruckdeschel A, et al. ASH annual meeting 2023, poster #1771.

CRR, complete response; BCL, B-cell lymphoma; DLBCL, diffuse large B-cell lymphoma; BITE, Bi-specific T-cell engagers; HGBCL, High-Grade B-cell lymphoma; IPI, International Prognostic Index; LDH, lactate dehydrogenase; mo, months; ORR, overall response rate; mOS, median overall survival; mPFS, median progression-free survival; R/R, relapsed or refractory; Tafa-Len, Tafasitamab and Lenalidomide.

TAFASITAMAB AND LENALIDOMIDE IN RELAPSED/REFRACTORY B-CELL LYMPHOMA: A MULTICENTER RETROSPECTIVE REAL-WORLD-STUDY OF PATIENTS FROM GERMANY AND AUSTRIA

Further results and conclusions summary

Efficacy outcome estimates for this real-world cohort were lower compared to L-MIND study

- Only 37% of the patients were L-MIND eligible (**52% of overall patients in 5L+, 18% prior CAR T**)
- **Fewer prior lines of therapy** were associated with **longer mPFS and mOS**
- e.g. histological subtypes other than DLBCL (**HGBCL**), comorbidities or dose reductions may partially add to the outcome

Tafa-Len seems to be more feasible for patients that don't show high-risk features

- **Relapsed vs. refractory disease ORR: 43% vs. 20%**, P=0.008
- **Relapsed vs. primary refractory disease mPFS: 5.3 vs. 1.7 mo**, P<0.001 and **mOS: 12.9 vs. 4.5 mo**, P<0.001

Data suggests that Tafa-Len can still be used after CAR T therapy or as a bridging therapy to CAR T

- **Prior CAR T therapy** (n=24) showed **only small differences in ORR, PFS or OS; CRR was reduced**
- **n=10 patients received CAR T after Tafa-Len** (n=2 as bridging therapy): **ORR 50%**
- No significant relationships were found for age, sex, and prior CAR T therapy

Frequency of observed adverse events are consistent with the L-MIND study

Tafasitamab for the Treatment of Relapsed or Refractory Diffuse Large B-Cell Lymphoma in the US Real-World Setting

- **Kim Saverno**,¹ Kristin M. Zimmerman Savill,² Bruce Feinberg,² John Galvin,¹ Prathamesh Pathak,² Sarah Gordon,² Theresa Amoloja,¹ Narendranath Epperla,³ Loretta J. Nastoupil⁴

- ¹Incyte Corporation, Wilmington, DE, USA; ²Cardinal Health, Dublin, OH, USA; ³The Ohio State University, Columbus, OH, USA; ⁴The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Tafasitamab for the treatment of relapsed/refractory diffuse large B-cell lymphoma in the US real-world setting

- **Study Design:** A retrospective, physician-abstracted, multisite, medical chart review*
 - 24 physicians/sites across the United States contributed patient data
 - 83% (n = 20) of participating physicians were from community oncology practices
- **Objectives:** Among R/R DLBCL patients who received Tafasitamab in real-world setting, describe:
 - Primary: Patient demographic and clinical characteristics, treatment and utilization patterns
 - Secondary: Clinical effectiveness
- **Inclusion criteria:** Initiation of Tafasitamab for R/R DLBCL from October 21, 2020, outside of a clinical trial
 - Concomitant use of lenalidomide was not a requirement for study eligibility

Median follow-up time was 6.5 months [range: 0.9-27.4]
since initiating Tafasitamab for the overall study population

Patient Demographics

Characteristic	All Patients (N=181)	Tafasitamab 2L (n=130)	Tafasitamab 3L (n=43)
Sex at birth, male, n (%)	102 (56.4)	68 (52.3)	30 (69.8)
Age at tafasitamab initiation, years, median (IQR)	71.1 (65.0-75.5)	72.1 (67.2-77.1)	67.7 (62.2-73.9)
Race, n (%)			
White	116 (64.1)	80 (61.5)	29 (67.4)
Black	40 (22.1)	31 (23.8)	9 (20.9)
Asian	11 (6.1)	10 (7.7)	1 (2.3)
Other*	3 (1.7)	2 (1.5)	1 (2.3)
Unknown	11 (6.1)	7 (5.4)	3 (7.0)
Ethnicity, n (%)			
Hispanic/Latino/Latina	31 (17.1)	20 (15.4)	8 (18.6)
Non-Hispanic/Non-Latino/Non-Latina	149 (82.3)	109 (83.8)	35 (81.4)
Unknown	1 (0.6)	1 (0.8)	0

- The median follow-up time since initiating tafasitamab for the overall study population was 6.5 (range, 0.9-27.4) months

*Including Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, or mixed race (Alaska Native + Asian + Black).
2L, second line; 3L, third line; IQR, interquartile range.

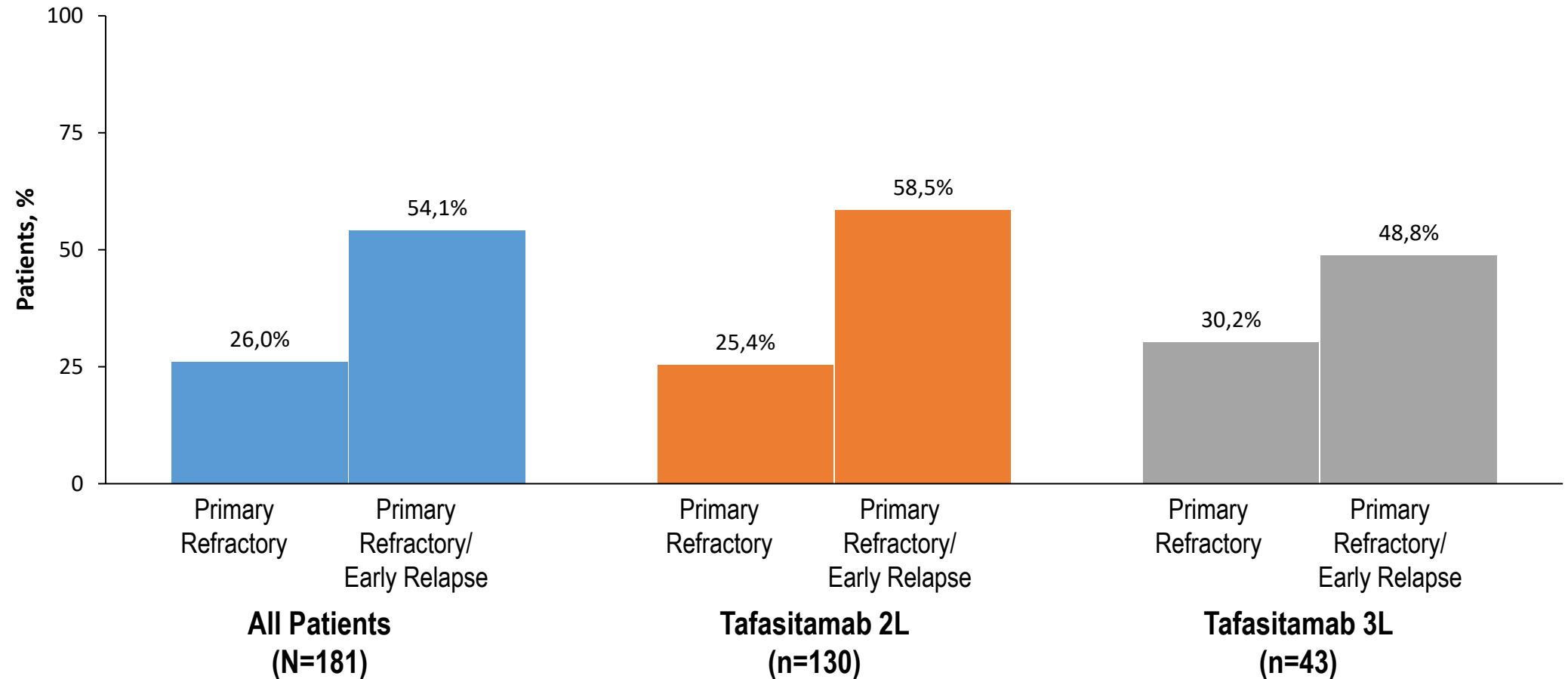
Patient Clinical Characteristics

Characteristic	All Patients (N=181)	Tafasitamab 2L (n=130)	Tafasitamab 3L (n=43)
ECOG PS at tafasitamab initiation, n (%)			
0-1	95 (52.5)	69 (53.1)	21 (48.8)
≥2	86 (47.5)	61 (46.9)	22 (51.2)
Ann Arbor stage at tafasitamab initiation, n (%)			
Stage I/II	10 (5.5)	9 (6.9)	1 (2.3)
Stage III	58 (32.0)	50 (38.5)	7 (16.3)
Stage IV	111 (61.3)	70 (53.8)	35 (81.4)
Unknown	2 (1.1)	1 (0.8)	0
R-IPI at tafasitamab initiation, n (% of patients with data available)*			
1-2 (good prognosis)	33 (19.5)	22 (18.3)	8 (19.0)
3-5 (poor prognosis)	136 (80.5)	98 (81.7)	34 (81.0)
Double-hit or triple-hit at tafasitamab initiation, n (%)			
Yes, double-/triple-hit	22 (12.2)	14 (10.8)	8 (18.6)
Tested, found to be negative	130 (71.8)	103 (79.2)	26 (60.5)
Unknown	29 (16.0)	13 (10.0)	9 (20.9)
Cell of origin information, n (%)			
GCB	81 (44.8)	60 (46.2)	17 (39.5)
Non-GCB/ABC	39 (21.5)	28 (21.5)	9 (20.9)
Unknown	61 (33.7)	42 (32.3)	17 (39.5)
Refractory to line prior to tafasitamab [†]	59 (32.6)	33 (25.4)	19 (44.2)

*There were no patients with an R-IPI score of 0 (very good prognosis) at tafasitamab initiation. [†]Defined as disease progression while receiving line of therapy prior to tafasitamab or disease progression occurring ≤6 months after the completion of the line of therapy prior to tafasitamab. 2L, second line; 3L, third line; ABC, activated B cell; GCB, germinal center B cell; ECOG PS, Eastern Cooperative Oncology Group performance status; R-IPI, revised International Prognostic Index.

54.1 % R/R < 12 month/ 45.9% late relapse > 12 month

Primary Refractory* and Early Relapse[†] Status



*Defined as disease progression while receiving first-line therapy or disease progression occurring ≤ 6 months after the completion of first-line therapy.

[†]Defined as disease progression while receiving first-line therapy or disease progression occurring ≤ 12 months after the completion of first-line therapy.

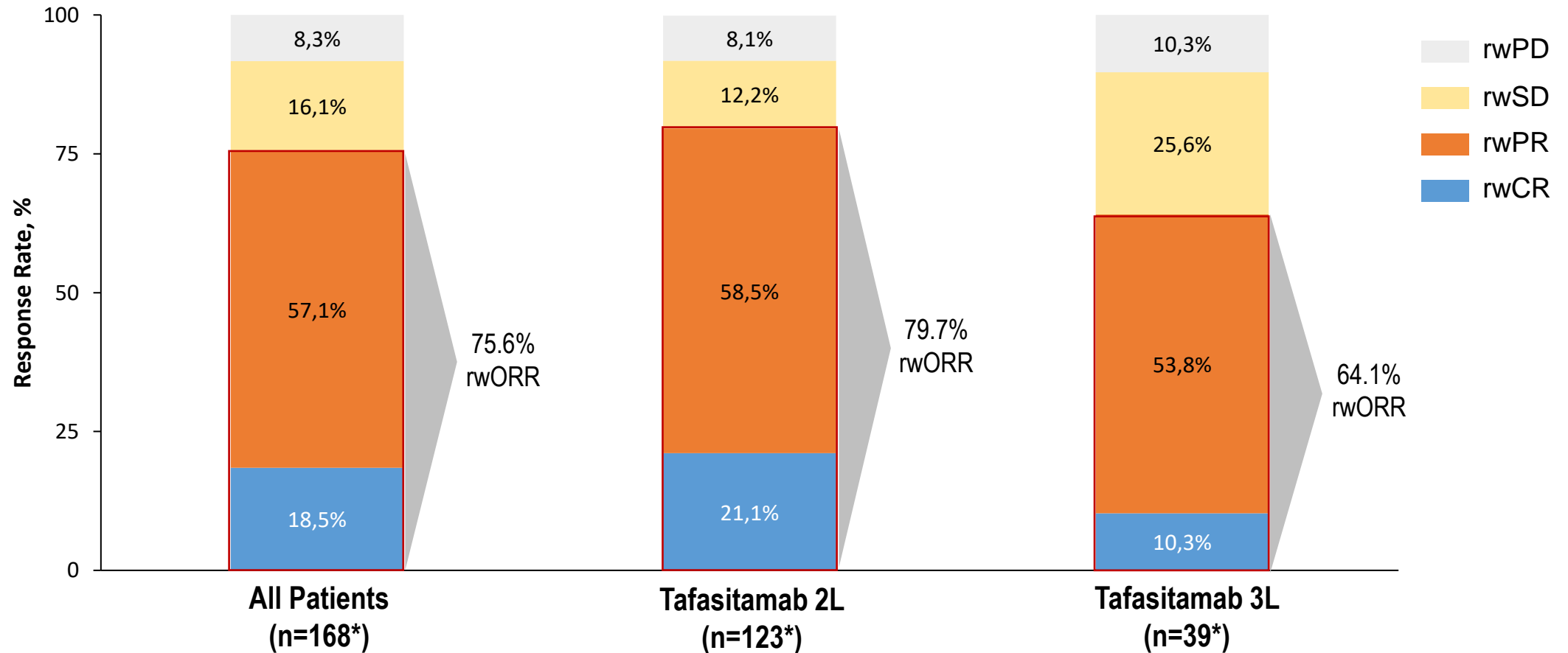
2L, second line; 3L, third line.

Treatment and Utilization Patterns

- At data collection (median follow-up time of 6.5 months), 80% (n=144) of patients were still alive, of whom 84% (n=121) were still receiving tafasitamab
- Among the 60 patients who discontinued tafasitamab, reasons for discontinuation included progression confirmed by scan (50%), progression defined clinically (17%), toxicity (15%), patient/caregiver request (3%), complete response (2%), and other reasons (13%)

	All Patients (N=181)
Prior ASCT therapy, n (%)	21 (11.6)
Prior CAR-T therapy, n (%)	6 (3.3)
Subsequent CAR-T therapy, n (%)	5 (2.8)

Real-World Best Response



- Response criteria used for assessing best response (% among those with best response available) included: Cheson 2007 (26.8%), Lugano (72.6%), and other (0.6%)

*Patient denominators represent those with available best disease response data.

2L, second line; 3L, third line; rwCR, real-world complete response; rwORR, real-world overall response rate; rwPD, real-world progressive disease; rwPR, real-world partial response; rwSD, real-world stable disease.

Real-World Progression-Free Survival (rwPFS)

Probability of rwPFS at Various Time Points From Time of Tafasitamab Initiation

	All Patients (N=181)	Tafasitamab 2L (n=130)	Tafasitamab 3L (n=43)
3-month rwPFS probability Point-estimate (lower 95%-upper 95%)	0.93 (0.88-0.96)	0.92 (0.86-0.96)	0.95 (0.83-0.99)
6-month rwPFS probability Point-estimate (lower 95%-upper 95%)	0.80 (0.73-0.85)	0.83 (0.75-0.89)	0.72 (0.54-0.84)

Conclusions

- Findings from this real-world analysis support the clinical benefit of tafasitamab when used in early lines of treatment of R/R DLBCL, as demonstrated in L-MIND^{1,2}
- The study included a racially and ethnically diverse patient population; nearly one-third of patients were from typically underrepresented racial groups and approximately one-sixth were of Hispanic ethnicity
- Patients were treated predominantly at community oncology settings, where most treatment for DLBCL is administered in the United States
- Most patients were still on tafasitamab at the time of data collection and follow-up was limited in duration
- Longer follow-up of these patients is warranted to better understand long-term outcomes of tafasitamab and treatment sequencing among this diverse patient population

1. Salles G, et al. *Lancet Oncol.* 2020;21:978-88. 2. Duell J, et al. *Haematologica.* 2021;106:2417-26.
DLBCL, diffuse large B-cell lymphoma; R/R, relapsed or refractory.

Overview

- Tafasitamab mode of action and clinical data
- Tafasitamab real world
- Tafasitamab experience including CD19 therapy sequencing

Therapy sequencing

Tafa/Len prior CAR T

Tafa/Len -> CAR T	US (Qualls et al.) 14 pts	Germany (Ruckdeschel et al.) 8 pts
ORR	n/a	50%
CR	n/a	10%
PFS	EFS: 3.7 months (after CAR T)	2.6 months
OS	8.1 months (after CAR T)	6.4 months

Tafa/Len post CAR T

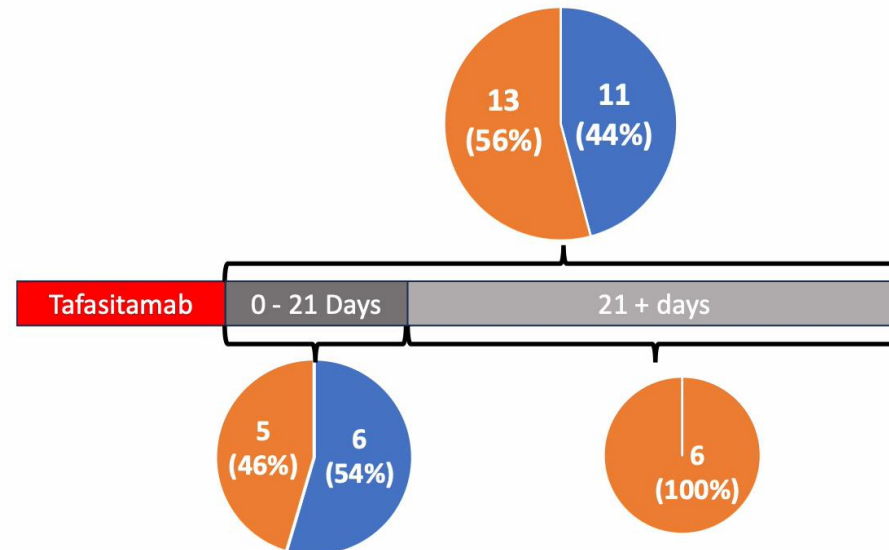
CAR T -> Tafa/Len	US (Qualls et al.) 52 pts	Germany (Ruckdeschel et al.) 24 pts
ORR	15 %	37,5 %
CR	15 %	21 %
PFS	1.6 months	7.9 months
OS	n/a	9.2 months

CD19 expression post Tafa/Len

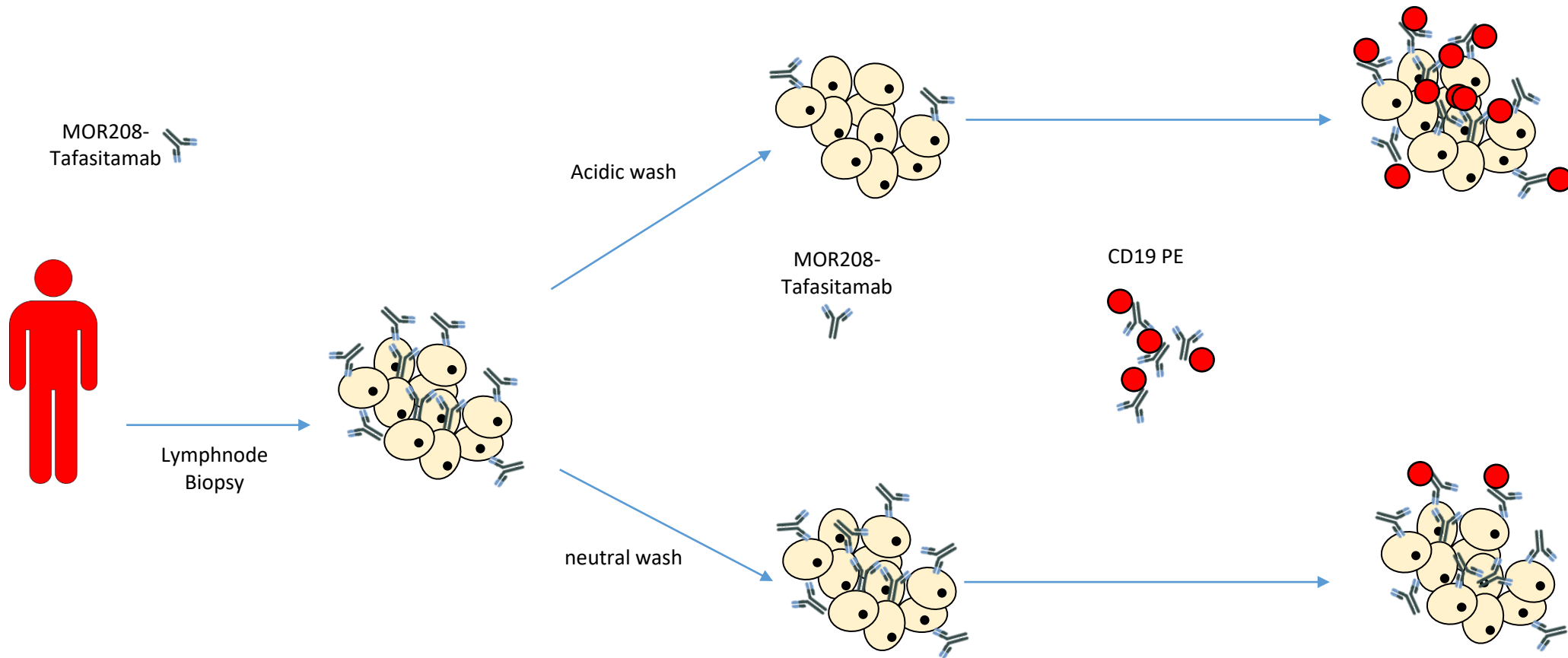
CD19 expression after Tafasitamab

- 24 patients biopsied after last dose of tafasitamab, a median of 18 days after last infusion
- 13 (54%) were CD19-positive and 11 (46%) were CD19-negative*
- All samples obtained more than 21 days after tafasitamab (6/6) were CD19-positive, while 46% obtained within 21 days were CD19-positive.

*Determined using IHC or flow cytometry per local institutional protocols.

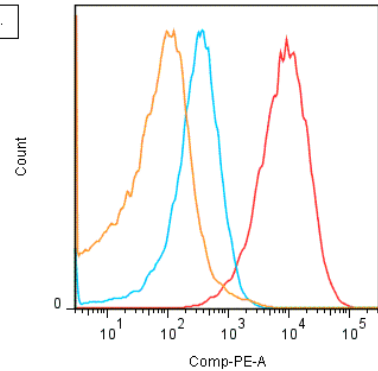


Case study – CD19 expression levels



Acidic wash procedure demasks ABC post treatment

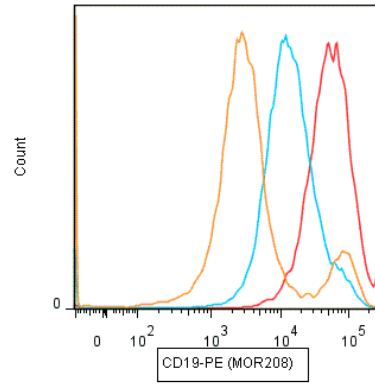
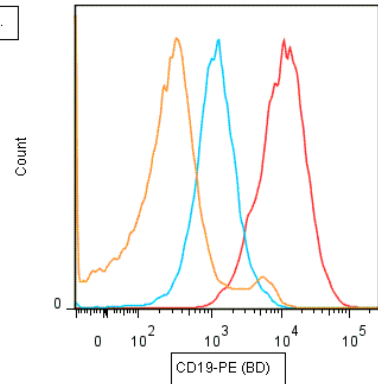
Sample 28.03.



- Negative ctrl. (CD3+)
- Neutral wash
- Acidic wash

- After treatment with tafasitamab only few CD19 epitopes on cell surface available
- However there is no downregulation of CD19 expression during treatment
- **Acidic wash demasks epitopes and allows quantification of CD19 surface expression**

Sample 08.04.



Free CD19 epitopes: after 1 week: 5%
after 2 weeks 10%
after 3 weeks 60%

unpublished data: Dülls Lab

Conclusion CD19 sequencing therapies

- **Tafa/Len is possible prior and post CD19 CAR T**
- **Take biopsies! (30 % of the non relapse patients after CAR T are CD19 loss variants)**
- **No CD19 loss variants for Tafa already described**
- **CD19 occupancy after Tafasitamab with CD19 recovery after 3 weeks post CD19 AB infusion**

The patients and their families!

Hermann Einsele, Würzburg

Florian Eisele, Würzburg

Max Topp, Würzburg

Leo Rasche, Würzburg

Study team Würzburg



Thank you!

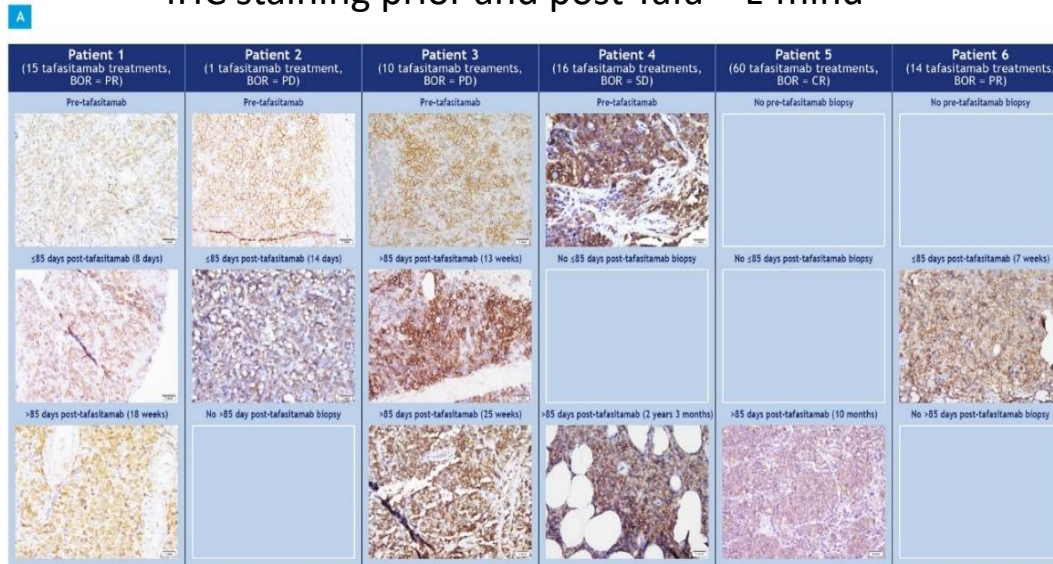


CD19 loss after Tafasitamab?

CD19 expression is maintained in DLBCL patients after treatment with tafasitamab plus lenalidomide in the L-MIND study

- DNA whole exome and RNA exome sequencing
- CD19 IHC staining

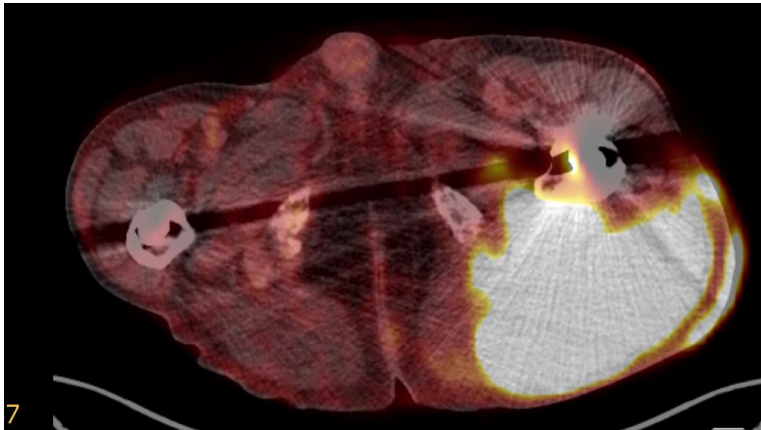
IHC staining prior and post Tafa – L-mind



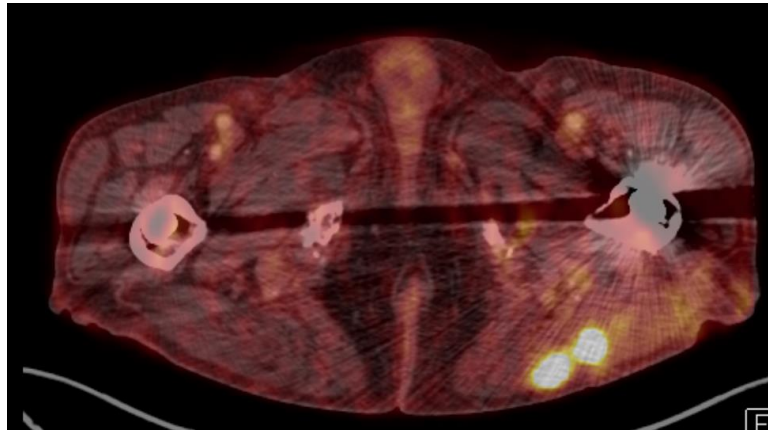
(A) IHC data CD19 from serial core needle lymph node FFPE biopsies of six L-MIND patients

Case study – FDG PET

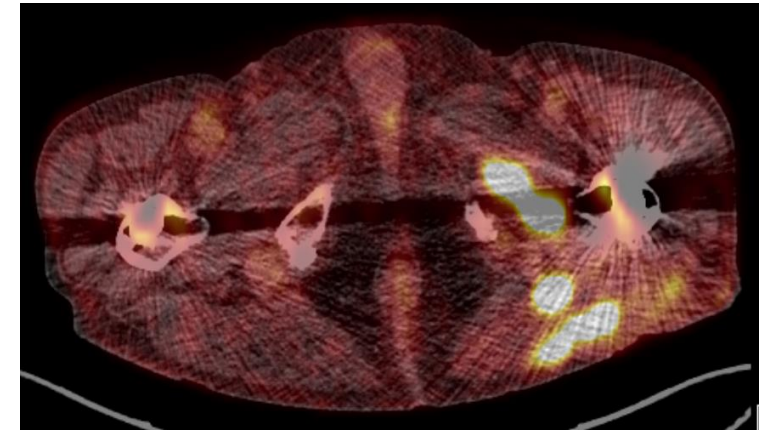
Prior Tafa/Len



After 3 cycles
PR



After 6 cycles
PD



Pictures: Nuclear Medicine Universitätsklinik Würzburg

PD, progressive disease; PR, partial response

MINJUVI 200 mg Pulver für ein Konzentrat zur Herstellung einer Infusionslösung

Wirkstoff: Tafasitamab

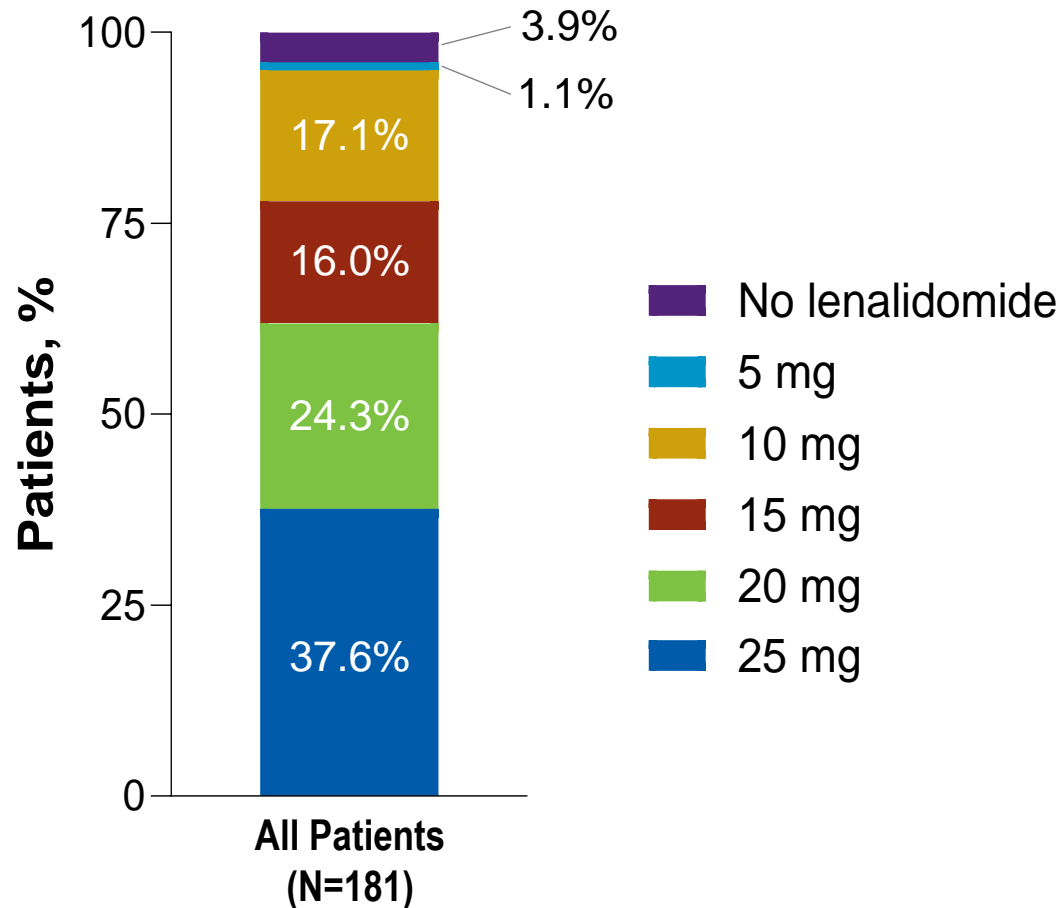
▼ Dieses Arzneimittel unterliegt einer zusätzlichen Überwachung. Dies ermöglicht eine schnelle Identifizierung neuer Erkenntnisse über die Sicherheit. Angehörige von Gesundheitsberufen sind aufgefordert, jeden Verdachtsfall einer Nebenwirkung zu melden. Hinweise zur Meldung von Nebenwirkungen, siehe Abschnitt 4.8 der Fachinformation.

Bevor Sie MINJUVI verschreiben, lesen Sie bitte die vollständige Fachinformation (Zusammenfassung der Merkmale des Arzneimittels).

Qualitative und quantitative Zusammensetzung: Eine Durchstechflasche mit Pulver enthält 200 mg Tafasitamab. Nach Rekonstitution enthält jeder ml der Lösung 40 mg Tafasitamab. Tafasitamab ist ein humanisierter CD19-spezifischer monoklonaler Antikörper, der Immunglobulin-G (IgG)-Subklasse, hergestellt in Säugetierzellen (Ovarialzellen des chinesischen Hamsters) mittels rekombinanter DNATechnologie. Sonstiger Bestandteil mit bekannter Wirkung: Jede Durchstechflasche von MINJUVI enthält 7,4 mg Natrium. Vollständige Auflistung der sonstigen Bestandteile: Natriumcitrat (Ph.Eur.), Citronensäure-Monohydrat, Trehalose-Dihydrat, Polysorbat 20. **Anwendungsgebiete:** MINJUVI wird angewendet in Kombination mit Lenalidomid gefolgt von einer MINJUVI-Monotherapie für die Behandlung bei erwachsenen Patienten mit rezidiviertem oder refraktärem diffusem großzelligem B-Zell-Lymphom (diffuse large B-cell lymphoma, DLBCL), für die eine autologe Stammzelltransplantation (ASZT) nicht infrage kommt. **Gegenanzeigen:** Überempfindlichkeit gegen den Wirkstoff oder einen der sonstigen Bestandteile. **Nebenwirkungen:** *Sehr häufige Nebenwirkungen* ($\geq 1/10$): Bakterielle, Virus- und Pilzinfektionen, einschließlich opportunistische Infektionen mit tödlichem Ausgang (z. B. bronchopulmonale Aspergillose, Bronchitis, Pneumonie und Harnwegsinfektion), Febrile Neutropenie, Neutropenie, Thrombozytopenie, Anämie, Leukopenie, Hypokaliämie, Appetit vermindert, Dyspnoe, Husten, Diarrhoe, Obstipation, Erbrechen, Übelkeit, Abdominalschmerz, Ausschlag (beinhaltet verschiedene Arten von Ausschlag, z. B. Ausschlag, makulo-papulöser Ausschlag, Ausschlag mit Juckreiz, erythematöser Hautausschlag), Rückenschmerzen, Muskelspasmen, Asthenie (einschließlich Unwohlsein), Ermüdung, Ödem peripher, Fieber. *Häufige Nebenwirkungen* ($\geq 1/100$, $< 1/10$): Sepsis (einschließlich neutropenische Sepsis), Basalzellkarzinom, Lymphopenie, Hypogammaglobulinämie, Hypokalzämie, Hypomagnesiämie, Kopfschmerzen, Parästhesie, Dysgeusie, Exazerbation einer chronisch-obstruktiven Lungenerkrankung, Nasenverstopfung, Hyperbilirubinämie, Transaminasen erhöht (beinhaltet ALT und/oder AST erhöht), Gamma-Glutamyltransferase erhöht, Pruritus, Alopezie, Erythem, Hyperhidrosis, Arthralgie, Schmerz in einer Extremität, Schmerzen des Muskel- und Skelettsystems, Kreatinin im Blut erhöht, Schleimhautentzündung, Gewicht erniedrigt, C-reaktives Protein erhöht, Reaktion im Zusammenhang mit einer Infusion. **Verkaufsabgrenzung:** Deutschland: Verschreibungspflichtig. Österreich: Rezept- und apothekenpflichtig, wiederholte Abgabe verboten. **Pharmakotherapeutische Gruppe:** Antineoplastische Mittel, monoklonale Antikörper, ATC-Code: L01FX12. **Inhaber der Zulassung:** Incyte Biosciences Distribution B.V., Paasheuvelweg 25, 1105 BP Amsterdam, Niederlande. **Weitere Informationen:** Ausführliche Informationen zu Warnhinweisen und Vorsichtsmaßnahmen für die Anwendung, Wechselwirkungen, Schwangerschaft und Stillzeit, Nebenwirkungen sowie Dosierung und Art/Dauer der Anwendung entnehmen Sie bitte der veröffentlichten Fachinformation (Zusammenfassung der Merkmale des Arzneimittels). **Stand:** 03/2022

Lenalidomide Treatment With Tafasitamab

Lenalidomide Starting Dose



- During treatment, 33 patients (19%) had ≥ 1 lenalidomide dose reduction
 - The most common reasons for any dose reductions were neutropenia (73%), thrombocytopenia (33%), performance status/patient frailty (27%), and renal dysfunction (18%)

Study Limitations

- The median follow-up time was relatively short (6.5 months), and many patients were still on tafasitamab at time of data collection
- As with any RWS, this study may be limited by unobserved data and missing data bias
- Source document verification was not conducted; however, all physicians were required to submit to data validation checks
- The study included data abstracted by a limited number of oncologists (n=24)
 - Treatment patterns may not reflect those of all oncologists managing patients with DLBCL
- Findings from this study may be impacted by a lack of uniform assessment criteria for certain variables such as disease response