Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Diffuse Large B-Cell Lymphoma

Part 2 of a 2-Part CME Satellite Symposium Series During the Society of Hematologic Oncology 2024 Annual Meeting

> Wednesday, September 4, 2024 7:30 PM – 8:30 PM CT

Faculty Grzegorz S Nowakowski, MD Laurie H Sehn, MD, MPH

Moderator Christopher R Flowers, MD, MS



Faculty



Grzegorz S Nowakowski, MD

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Moderator

Christopher R Flowers, MD, MS

Division Head, Division of Cancer Medicine Chair, Professor, Department of Lymphoma/Myeloma John Brooks Williams and Elizabeth Williams Distinguished University Chair in Cancer Medicine The University of Texas MD Anderson Cancer Center Houston, Texas





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Module 1: Front-Line Management of Diffuse Large B-Cell Lymphoma (DLBCL) — Dr Sehn

Module 2: Integration of Novel Agents into the Care of Patients with Relapsed/Refractory DLBCL — Dr Flowers

Module 3: Bispecific Antibody Therapy for DLBCL — Dr Nowakowski



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Front-Line Management of Diffuse Large B-Cell Lymphoma (DLBCL)

Laurie H. Sehn, MD, MPH Chair, Lymphoma Tumour Group BC Cancer Centre for Lymphoid Cancer Vancouver, Canada



Provincial Health Services Authority



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Dr Sehn — Disclosures

Consulting Agreements	AbbVie Inc, AstraZeneca Pharmaceuticals LP, Bristol Myers Squibb, Genentech, a member of the Roche Group, Incyte Corporation, Janssen Biotech Inc, Kite, A Gilead Company, Merck, Novartis, Seagen Inc, Teva Oncology
Contracted Research	Genentech, a member of the Roche Group
Data and Safety Monitoring Board/Committee	CARGO Therapeutics

Outcomes with R-CHOP in Untreated DLBCL



Sehn and Salles. NEJM 2021

Distinct Signaling Pathways and Outcomes According to Cell-of-Origin (ABC vs GCB)



Diffuse large B-cell lymphoma

Alizadeh et al, Nature 2000 Rosenwald et al, NEJM 2002 Lenz et al. NEJM 2008

15%-20% difference in PFS



BC Cancer **R-CHOP** treated Alduaij et al Blood 2023

127

123

114

107

100

Freedom From Progression (%)

80-

60-

40-

20

No. at risk:

213

157

140

GCB

UNC

ABC

GOYA Trial **R-CHOP v G-CHOP PFS including both arms** Vitolo et al J Clin Oncol 2017

Dark Zone Signature DLBCL



Subgroup of GCB DLBCL with molecular signature similar to high-grade B-cell lymphoma with *MYC* and *BCL2* rearrangements and have poor outcome with R-CHOP



Ennishi et al. J Clin Oncol 2019; Alduaij et al. Blood 2023

Novel DLBCL Genomic Subtypes



de Leval et al. Blood 2022

Randomized Trials of Novel Agents

Author	Therapy	Better than R-CHOP		
Vitolo, JCO 2017	Obinutuzumab-CHOP	Νο		
Leonard, JCO 2017	R-CHOP- Bortezomib	No		
Davies, Lancet 2019	R-CHOP- Bortezomib	No		
Younes, JCO 2019	R-CHOP-Ibrutinib	? No		
Nowakowski, JCO 2021	Lenalidomide-R-CHOP	? Yes (Phase II)		
Nowakowski, JCO 2021	Lenalidomide-R-CHOP	No		

Five-Year Update of REMoDL-B: Improved PFS in Molecular Subgroups with Bortezomib-R-CHOP



Significant improvement in PFS with Bortezomib-R-CHOP in ABC and Molecular High Grade subgroups, but not in GCB subgroup

Davies, A et al. JCO 2023

PHOENIX Study: R-CHOP +/- Ibrutinib in Newly Diagnosed non-GCB DLBCL



Younes, A et al, JCO 2019

Genetic-Based Subtypes as a Predictive Marker Retrospective Analysis of PHOENIX Trial



Wilson, WH et al. Cancer Cell 2021

Polatuzumab Vedotin: Anti-CD79b Drug Conjugate

 Microtubule inhibitor MMAE conjugated to CD79b monoclonal antibody via a protease-cleavable peptide linker



POLARIX: A randomized double-blinded study



*IV on Day 1; [†]R-CHOP: IV rituximab 375mg/m², cyclophosphamide 750mg/m², doxorubicin 50mg/m², and vincristine 1.4mg/m² (max. 2mg) on Day 1, plus oral prednisone 100mg once daily on Days 1–5. IPI, International prognostic index; ECOG PS, Eastern Cooperative Oncology Group performance status; R, randomized.

Tilly H et al. NEJM 2021

Primary endpoint: Progression-free survival Pola-R-CHP significantly improved PFS versus R-CHOP



HR 0.73 (P=0.02) 95% CI: 0.57, 0.95

- Pola-R-CHP demonstrated a 27% reduction in the relative risk of disease progression, relapse, or death versus R-CHOP
- 24-month PFS: 76.7% with Pola-R-CHP versus 70.2% with R-CHOP (Δ=6.5%)

ITT population. Data cut-off: June 28, 2021; median 28.2 months' follow-up. NE, not evaluable.

Tilly H et al. NEJM 2021

Univariate Subgroup Analyses

	Pola-R-CHP (N=440)		R-CHOP (N=439)					
Total N	'n	2-year Rate	n	2-year Rate	Hazard Ratio	95% Wald Cl	Pola-R-CHP Better	R-CHOP Better
271 608	140 300	74-1 77-9	131 308	71-9 69-5	0-9 0 7	(0-6 to 1-5) (0-5 to 0-9)		
473 406	239 201	75-9 77 7	234 205	65·9 75·2	07 09	(0·5 to 0·9) (0·6 to 1·4)	-	_
737 141	374 66	78·4 67·2	363 75	71·2 65·0	0.8 0.8	(0.6 to 1.0) (0.5 to 1.4)		
334 545	167 273	79·3 75·2	167 272	78-5 65-1	1.0	(0-6 to 1-6) (0-5 to 0-9)		-
494 385	247 193	82·7 69·0	247 192	70·7 69·7	0-6 1-0	(0-4 to 0-8) (0-7 to 1-5)	-	
603	302	78.6	301	72.0	0.8	(0.6 to 1.1)	-	4
160 116	81 57	74.3 70.8	79 59	65.6 67.3	0.6	(0-4 to 1-5) (0-6 to 1-5)		
99 232 548	47 124 269	89·1 80·7 72·6	52 108 279	85·5 73·6 66·1	0.6 0.8 0.8	(0.2 to 1.8) (0.5 to 1.3) (0.6 to 1.1)		
300 575	146 291	78-9 75-4	154 284	75-6 67-2	0-8 0-7	(0.5 to 1.3) (0.5 to 1.0)		_
453 426	227 213	80·2 73·0	226 213	74-5 65-8	0-8 0-7	(0.5 to 1.1) (0.5 to 1.0)		1
352 221 95 211	184 102 44 110	75-1 83-9 73-0 73-8	168 119 51 101	76 9 58 8 86 2 64 3	10 04 19 07	(0.7 to 1.5) (0.2 to 0.6) (0.8 to 4.5) (0.4 to 1.2)		
290 438 151	139 223 78	75-5 77-7 76-0	151 215 73	63·1 75·7 69·8	0.6 0.9 0.8	(0.4 to 1.0) (0.6 to 1.3) (0.4 to 1.5)		
45 620 214	26 305 109	69·0 76·8 78·5	19 315 105	88.9 70.3 66.4	3-8 0-7 0-6	(0.8 to 17.6) (0.5 to 1.0) (0.4 to 1.1)	,	
	Total 271 608 473 406 737 141 334 545 603 160 116 99 232 548 300 575 453 426 352 221 95 211 290 438 151 45 620 214	Poi: Total n 2711 140 608 300 4733 239 406 201 737 374 141 66 334 167 545 247 494 247 495 247 603 302 160 81 116 87 99 47 232 124 548 269 3000 1466 575 291 453 227 426 2213 352 184 295 184 291 44 110 290 453 223 151 78 455 26 305 214	Pola-R-CHP (N=440) Total n 2year n 2year 2711 300 74-1 406 201 77.9 4732 239 75.9 4733 266 78.4 737 376 78.4 334 167 79.3 3545 167 79.3 4945 247 89.7 1603 302 78.6 1616 81 70.8 99 474 89.7 328 269 78.9 300 146 78.9 300 146 78.9 453 2213 80.7 452 2213 80.2 300 146 78.9 452 2213 80.2 300 146 78.9 545 213 80.2 452 223 80.2 300 146 73.9	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{ c c c c } \hline Pola-R-CHP \\ (N=440) \\\hline Total \\ n \\ \hline 2-year \\ \hline 2-$	$\begin{array}{ c c c c c c c } \hline Pola-R-CHP \\ (N=440) \\ \hline 2-year \\ n & Rate & Rate$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Pola-R-CHP (N=440) R-CHOP (N=439) Pazard Rate Pola-R-CHP Ratio Pola-R-CHP Better 271 140 74-1 131 71-9 0.9 0.6 to 15) Image: Construction of the text of text o

0.25

? Preferential Benefit

Older, >60 y

IPI = 3-5 Non-Bulky < 7.5 cm

ABC Subtype

Tilly H et al. NEJM 2021

POLARIX Trial: PFS in COO Subgroups

Cell of origin (COO) determined in 689 patients (ABC n=235; GCB n=357; unclassified n=97)



Dark Zone Signature-Positive DLBCL: Trend to Improved PFS



POLARIX: PFS in Elderly Patients Aged ≥70 Years



2-year PFS: 77.1% Pola-R-CHP vs 67.0% R-CHOP

Phase 3 POLAR BEAR Trial: R-POLA-MINI-CHP vs R-MINI-CHOP in Elderly or Frail Patients with DLBCL



Initial Safety Analysis - Patient Characteristics (n=140)

Characteristic		R-mini-Cł	HOP (n=71)	R-pola-mini-CHP (n=69)		
Sex	male	42	(60.9)	30	(46.2)	
	female	27	(39.1)	35	(53.8)	
Age group	<80	12	(18.2)	10	(15.9)	
	80-85	38	(57.6)	47	(74.6)	
	>85	16	(24.2)	6	(9.5)	
Stage	2	12	(20.0)	11	(19.6)	
	3-4	48	(67.6)	45	(65.2)	
IPI	Low (0-1)	12	(16.9)	12	(17.3)	
	Low intermediate (2)	12	(17.6)	11	(16.9)	
	High intermediate (3)	12	(17.6)	11	(16.9)	
	High (4-5)	32	(45.1)	31	(44.9)	
WHO Performance Status	0-1	41	(57.7)	40	(57.9)	
	2	17	(26.6)	13	(20.6)	
	3	6	(9.4)	10	(15.9)	
Lymphoma subtype	DLBCL	61	(92.4)	56	(87.5)	
	FL grade 3B	1	(1.5)	4	(6.3)	
	HGBCL with MYC/BCL2	3	(4.5)	4	(6.3)	
	Other	1	(1.5)	0	(0.0)	
CIRS-G	< 10	36	(50.7)	46	(66.7)	
	>= 10	11	(15.5)	10	(14.5)	
	Missing	24	(33.8)	13	(18.8)	

Select Adverse Events

Adverse event		R-mini-CH	OP (n=71)	R-pola-mini-CHP (n=69)		
Anemia ¹	Grade 3-5	2	2.8%	10	14%	
Neutropenia ¹	Grade 3-5	8	11%	9	13%	
Thrombocytopenia ¹	Grade 3-5	0	0	1	1.4%	
Infection	Total	32	45%	39	57%	
	Grade 3-5	10	14%	11	16%	
Gastrointestinal	Total	22	31%	38	55%	
	Grade 3-5	12	17%	21	30%	
Cardiovascular	Total	21	30%	16	23%	
	Grade 3-5	6	8.5%	6	8.7%	
Peripheral neuropathy	Grade 1	7	9.9%	9	13%	

¹For hematological toxicity, only grade 3-5 was recorded

Ongoing/Planned Trials in Upfront DLBCL

BTK-inhibitor + R-CHOP trials

- Acalabrutinib-R-CHOP: ESCALADE (non-GCB); ReMoDL-A (all)
- **First-MIND Trial:** Tafasitamab/Lenalidomide-R-CHOP
- **ZUMA-23:** Axi-cel v R-CHOP/DA-EPOCH-R (Stage 3/4, IPI 4-5)
- CD20/CD3 Bispecific Antibodies + R-CHOP/Pola-R-CHP
- Response-adapted trials (ctDNA)
- Novel therapy approaches (Smart Stop trial)
- Biology-driven trials

GUIDANCE-01: a model for trials of precision medicine based on genetics-based subtypes



Zhang et al Cancer Cell 2023

Faculty Case Presentations


Case Presentation: Dr Flowers

Initially admitted with epidural DLBCL with compression fracture

- IR Biopsy showed ABC subtype
- PET/CT Stage IV disease with BM involvement by PET
- LDH > ULN
- LP negative
- Initiated on pola-R-CHP

QUESTIONS FOR THE FACULTY

In general, how do you choose between polatuzumab vedotin/R-CHP and R-CHOP as first-line treatment for DLBCL?

Do you believe that cell of origin assay results available to community-based oncologists are reliable enough to guide treatment decision-making?



Case Presentation: Dr Nowakowski

- 19-year-old female presented with couple of weeks history of anterior abdominal wall mass
- CT showed mass involving chest wall but also liver lesions
- CT-guided biopsy of chest lesion showed diffuse large B-cell lymphoma, GCB phenotype without myc translocation and without double expression of myc or BCL2, Lymph3Cx – GCB, non PMLBCL
- PET scan showed conglomerate/multifocal anterior abdominal wall and hepatic lesions
- Paraesophageal, upper abdominal, and gastrohepatic metastatic FDG avid lymphadenopathy



Case Presentation: Dr Nowakowski (cont.)

- GCB DLBCL, Stage 4, IPI 3 (stage, elevated LDH, >1 extra nodal site)
- Pt entered study R-CHOP+Golcadomide vs. R-CHOP+Placebo (Double Blind Placebo Controlled)



QUESTIONS FOR THE FACULTY

What do you think the results of the first-line R-CHOP with or without golcadomide trial are going to show?

What other ongoing clinical trials evaluating first-line treatment for DLBCL are you most excited about?

In general, what is your usual up-front treatment for double-hit DLBCL?



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Making Cancer History

Dr Flowers — Disclosures

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Nonrelevant Financial Relationships	Burroughs Wellcome Fund, Cancer Prevention and Research Institute of Texas (CPRIT Scholar in Cancer Research), Eastern Cooperative Oncology Group, Foresight Diagnostics, National Cancer Institute, N-Power Medicine Inc, V Foundation

Not Everyone Will Benefit from CAR-T



Predictive factors associated with poor outcome following CAR T-cell therapy:

- \geq 2 extranodal sites
- TMTV > 80 mL
- Elevated LDH

Vercellino L et al. Blood Adv. 2020;4(22):5607-5615.

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Selected Therapies Approved in R/R DLBCL

	Pola-BR	Selinexor	Tafasitamab/Lenalidomide	Loncastuximab Tesirine
MOA	Anti-CD79b ADC	XPO-1 inhibitor	Anti-CD19 mAb/Immunomodulator	Anti-CD19 ADC
ORR	45%	28%	58%	48%
CR rate	40%	10%	40%	24%
PFS	9.2 m	2.6 m	11.6 m	4.9 m
DOR	12.6 m	9.3 m	43.9 m	10.3 m
OS	12.4 m	NR	33.5 m	9.9 m

Novel salvage regimens may improve outcomes with ASCT

Sehn LH et al. *Blood Adv.* 2022;6(2):533-543. Kalakonda N et al. *Lancet Haematol.* 2020;7(7):e511-e522. Duell J et al. *Haematologica.* 2021;106(9):2417-2426. Caimi PF et al. *Lancet Oncol.* 2021;22(6):790-800.

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Polatuzumab Vedotin in Relapsed or Refractory Diffuse Large B-Cell Lymphoma J Clin Oncol. 2020

Laurie H Sehn, Alex F Herrera, Christopher R Flowers, Manali Kamdar, Andrew McMillan, Mark Hertzberg, Sarit Assouline, Tae Min Kim, Won Seog Kim, Muhit Ozcan, Jamie Hirata, Elicia Penuel, Elicia Penuel, Ji Cheng, Joseph N. Paulson, Grace Ku, Matthew Matasar



Pola-BR PFS and OS



Sehn LH et al. ASH 2020. Abstract 3020; Sehn LH et al. Blood Adv. 2022;6(2):533-543.

- The significant survival benefit with Pola+BR persists with longer follow-up
- Response rates in the extension cohort consistent with the randomized Pola+BR arm
- The 2-year PFS 28.4% and the 2-year OS 38.2% for patients in the randomized Pola+BR cohort

BR, bendamustine plus rituximab; CI, confidence interval; HR, hazard ratio; mOS, median overall survival; mPFS, median progression-free survival; pola, polatuzumab.

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Pola-BR Safety Summary

	Randomized		Extension	
AE summary, n (%)	BR (N=39)	Pola+BR (N=39)	Cohort Pola+BR (N=106)	Pooled Pola+BR (N=151)
Any Grade AEs	38 (97.4)	39 (100)	105 (99.1)	150 (99.3)
Grade 3–4 AEs	28 (71.8)	34 (87.2)	83 (78.3)	122 (80.8)
SAEs	24 (61.5)	26 (66.7)	56 (52.8)	86 (57.0)
Grade 5 AEs	10 (25.6)	11 (28.2)	6 (5.7)	17 (11.3)

No new safety signals identified with longer follow-up in randomized arms + patients in the extension cohort

Sehn LH et al. ASH 2020. Abstract 3020.

	-		
	Pooled Pola+BR (N=151)		
Common AES, n (%)	Any grade	Grade 3–4	
Hematological AEs			
Neutropenia	71 (47.0)	49 (32.5)	
Thrombocytopenia	49 (32.5)	31 (20.5)	
Anemia	49 (32.5)	19 (12.6)	
Non-hematological AEs			
Infections and infestations	74 (49.0)	33 (21.9)	
Diarrhea	54 (35.8)	6 (4.0)	
Nausea	50 (33.1)	1 (0.7)	
Pyrexia	44 (29.1)	2 (1.3)	
Fatigue	40 (26.5)	3 (2.0)	
Decreased appetite	39 (25.8)	4 (2.6)	
AEs of special interest			
Peripheral neuropathy	47 (31.1)	3 (2.0)	

Sehn LH et al. ASH 2022. Final Analysis Abstract 4260

Tafasitamab + Lenalidomide: Outcomes



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Salles G et al. Lancet Oncol. 2020;21(7):978-988.

Tafasitamab + Lenalidomide: Safety



- 37 patients (43%) required lenalidomide dose reduction
- 62/80 patients (78%) were able to stay at dose \geq 20mg/d

^aAE collection period included 30 days after end of treatment AEs, adverse events; LEN, lenalidomide; TEAEs, treatment-emergent AEs . Incidence and severity of TEAEs are lower during the tafasitamab monotherapy phase

Incidence, %

Ten patients (12%) discontinued tafasitamab + LEN because of AEs

Salles G et al. Lancet Oncol. 2020;21(7):978-988.

Loncastuximab Tesirine: LOTIS-2 Trial Single Arm Open Label Phase 2 Study in DLBCL





Lonca, loncastuximab tesirine; ORR, overall response rate; Q3W, every 3 weeks; Q12W, every 12 weeks; R/R, relapsed/refractory.

LOTIS-2 Trial: Long-Term Efficacy with Loncastuximab Tesirine for R/R DLBCL



Caimi PF et al. *Haematologica* 2024;109(4):1184-93.

Loncastuximab Tesirine: Adverse Events

Adverse Event (AE)	Patients n (%)
Any Treatment Emergent AE	143 (98.6)
GGT increased	59 (40.7)
Neutropenia	57 (39.3)
Thrombocytopenia	48 (33.1)
Fatigue	40 (27.6)
Anemia	38 (26.2)
Nausea	34 (23.4)
Cough	32 (22.1)
Alkaline phosphatase increased	29 (20.0)
Peripheral Edema	29 (20.0)

GGT, gamma glutamyltransferase ; SAEs, serious adverse events; TEAE, treatment-emergent adverse event..

TEAE leading to treatment discontinuation: 26 (17.9%)

Caimi PF et al. Lancet Oncol. 2021

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ECHELON-3: Study Design

- Multicenter, double-blind, placebo-controlled, randomized phase 3 trial
- Primary endpoint: OS in ITT population



BV 1.2 mg/kg Q3W + rituximab 375 mg/m² IV Q3W + lenalidomide 20 mg PO QD (n = 112)

> Placebo + rituximab 375 mg/m² IV Q3W + lenalidomide 20 mg PO QD (n = 118)

Stratification:

- CD30 status (≥1% vs <1%)
- Cell of origin (GCB vs non-GCB)
- Prior CAR T-cell therapy (yes vs no)
- Prior SCT (yes vs no)

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ECHELON-3: Outcomes - Response

All patients	BV + Len + R (n = 112)	Placebo + Len + R (n = 118)
ORR, %	64.3	41.5
CR	40.2	18.6
With CD30-negative disease (<1%)	n = 76	n = 80
ORR, %	60.5	37.5
CR	40.8	15.0
With CD30-positive disease (≥1%)	n = 36	n = 38
ORR, %	72.2	50.0
CR	38.9	26.3

ECHELON-3: Outcomes-PFS

PFS	BV + Len + R (n = 112)	Placebo + Len + R (n = 118)
Median PFS, mo	4.2	2.6
HR (95% CI)	0.527 (0	.380-0.729)

MD Anderson Department of Lymphoma/Myeloma

Kim. ASCO 2024. Abstract LBA7005

ECHELON-3: Outcomes



	BV+Len+R (n=112)	Placebo+Len+R (n=118)
OS, median	13.8	8.5
(95% CI), months	(10.3-18.8)	(5.4-11.7)
Hazard ratio (95% CI) ^b	0.629 (0.445-0.891)	
Log-rank P value ^c		.0085
Events (deaths)	58	76
Follow-up, median	15.5	18.9
(95% CI), months	(12.2-18.1)	(12.2-23.2)

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ECHELON-3: Adverse Events

TEAEs, %	BV + Len + R (n = 112)	Placebo + Len + R (n = 116)
Any grade	97	97
Peripheral neuropathy	31	24
Grade ≥3	88	77
■ Febrile neutropenia	9	9
Grade 5	12	8

Faculty Case Presentations



Case Presentation: Dr Nowakowski

- 76-year-old gentleman who was diagnosed with DLBCL, GCB phenotype, no myc rearrangement in March of 2019
- Therapy with R-CHOP and radiation therapy to mesenteric mass to total of 30 Gy completed in October of 2019 with CR
- July 2021, recurrent disease initiated on RICE salvage chemotherapy which was associated with significant toxicity, SD as best response
- Lenalidomide and tafasitamab with CR continued for 12 cycles of combination and then tafasitamab single for 2 years
- Feb 2024, retro esophageal mass, bx revealed DLBCL: CD19 expression was negative per immunohistochemistry, rapid progression required pola-v rituximab bridging
- March, CART lisocabtagene maraleucel in CR day 30 and PET 7/17/24 showing ongoing CR

QUESTIONS FOR THE FACULTY

In general, what has been your clinical experience in terms of efficacy and tolerability with tafasitamab/lenalidomide for patients with DLBCL?

For patients with relapsed DLBCL, how do you generally sequence bispecific antibodies, CAR T-cell therapy and tafasitamab/lenalidomide?



Case Presentation: Dr Sehn

- 75 yo female with hypertension, type 2 diabetes and osteoarthritis
- Presented with fatigue, night sweats and bilateral neck fullness, ECOG PS 2
- Labs: mild anemia 9.4 g/dL, LDH 420 U/L (ULN 240)
- PET/CT: lymphadenopathy above and below diaphragm (maximum 14 cm)
- Biopsy of cervical LN: DLBCL, ABC subtype
- Treated with 6 cycles of dose-reduced R-CHOP (with 1 delay due to infection)
- CR on post-treatment PET/CT



Case Presentation: Dr Sehn (cont'd)

- 20 months later, she developed enlarged cervical nodes, PET/CT and biopsy confirmed recurrent DLBCL
- Not considered to be a transplant candidate
- CAR T-cell therapy not available second-line
- Treated with Pola-BR for 6 cycles, achieved a CR, and remains in remission 2 years later

QUESTIONS FOR THE FACULTY

What treatment options would you discuss with a patient with DLBCL who is not eligible for or whose disease has progressed on bispecific antibodies, CAR T-cell therapy and tafasitamab/ lenalidomide?

Would you ever attempt to rechallenge with polatuzumab vedotin later in the treatment course for a patient who received it up front and experienced subsequent disease progression?

In general, what has been your clinical experience in terms of efficacy and tolerability with loncastuximab tesirine for patients with DLBCL?



Agenda

Module 1: Front-Line Management of Diffuse Large B-Cell Lymphoma (DLBCL) — Dr Sehn

Module 2: Integration of Novel Agents into the Care of Patients with Relapsed/Refractory DLBCL — Dr Flowers

Module 3: Bispecific Antibody Therapy for DLBCL — Dr Nowakowski





Bispecific Antibody Therapy for DLBCL

Grzegorz (Greg) S. Nowakowski MD, FASCO Professor of Medicine and Oncology Chair, Lymphoid Malignancy Group Deputy Director Mayo Clinic Comprehensive Cancer Center Mayo Clinic



Dr Nowakowski — Disclosures

How do they work — T-Cell Engagers Revolution





Adapted Ma et al. Frontiers in Immunology 2021

Glofitamab Activity in Aggressive B-Cell Lymphoma

Pivotal Phase II expansion in patients with R/R DLBCL and ≥2 prior therapies (NP30179)

Key inclusion criteria	Glofitamab IV administration			
 DLBCL NOS, HGBCL, transformed FL or PMBCL ECOG PS 0–1 ≥2 prior therapies, including: anti-CD20 antibody anthracycline 	 Fixed-duration treatment max. 12 cycles (fixed duration) CRS mitigation: obinutuzumab pretreatment (1 x 1000mg) C1 step-up dosing monitoring after first dose (2.5mg) 	D15: 10mg D8: 2.5mg D1: Gpt C1 21-day cycl	D1: 30mg C2	D1: 30mg

- Primary: CR (best response) rate by IRC
- Key secondary: ORR rate, DoR, DoCR, PFS, and OS

Glofitamab – expansion cohort Response and duration of response

	IRC (N=155)*	
CR rate, n (%) [95% Cl]	62 (40) [32.2–48.2]	
ORR, n (%) [95% Cl]	80 (52) [43.5–59.7]	
Median follow-up, months (range)	18.2 (0–33)	
Ongoing CRs, n/N (%)	42/62 (68)	
Median DoCR, months (95% CI)	26.9 (18.4–NE)	

*Intent-to-treat population; CI, confidence interval; NE, not estimable.

Extended follow-up of 18 months. Median time on study was 21.2 months

Prior CART: 34%

Michael Dickinson, et al. *NEJM* 2022 & EHA 2022 oral presentation Falchi L, et al. ASCO 2023 Abstract P7550



Phase I/II Study of Subcutaneous Epcoritamab in R/R B-Cell NHL



Hutchings. *Lancet* 2021;398:1157.
Epcoritamab – expansion cohort Response rate

Responses assessed by investigator	LBCL N=157ª		
ORR, n (%)	92 (59)		
CR	65 (41)		
PR	27 (17)		
DOCR, median, mo	NR		
24-mo KM estimate, %	62		
30-mo KM estimate, %	54		
Follow-up, median, mo	26.4		

Extended follow-up beyond 2.5 years

Prior CART: 39%

Catherine Thieblemont, et al. *J Clin Oncol* 2022 Karimi YH, et al. ASCO 2024 Abstract 7039

PFS among complete responders



Kaplan-Meier estimates are shown. "Based on COVID-19-adjusted sensitivity analyses, which censored deaths due to COVID-19.

OS among complete responders 100 87% 85% 80-Overall survival (%) 76% 71% 71% 60-40-20-LBCL complete responders COVID-19 adjustment^a 21 12 15 18 24 27 30 33 0 3 9 Time (months) Number at risk 65 63 59 54 50 47 32 65 61 55 48 14 65 65 63 61 59 55 54 50 48 47 32 14

Kaplan-Meier estimates are shown. "Based on COVID-19-adjusted sensitivity analyses, which censored deaths due to COVID-19.

Deep Responses Consistent Across Key Subgroups



Based on IRC assessment and Lugano criteria.

Cytokine release syndrome — Glofitamab



CRS was mostly low grade, time of onset was predictable, and most events occurred during C1

Falchi L, et al. ASCO 2023 Abstract P7550

Dickinson M, et al. NEJM 2022 & EHA 2022 oral presentation

Cytokine release syndrome — Epcoritamab

CRS Events by Dosing Period

	Expansion N=157	C1 Optimization N=81
CRS, n (%) ^a	80 (51)	30 (37)
G1	50 (32)	21 (26)
G2	25 (16)	8 (10)
G3	5 (3)	1 (1)
Treated with tocilizumab, n/n (%) ^b	23/80 (29)	13/30 (43)
Treated with corticosteroid, n/n (%) ^b	17/80 (21)	6/30 (20)
Leading to treatment discontinuation, n (%)	1 (1)	0
CRS resolution, n/n (%) ^b	78/80 (98)	30/30 (100)
Median time to resolution (range), ^b d	2 (1-27)	2 (1–15)

CRS was primarily low grade and predictable: most events occurred following the first full dose. C1 optimization reduced the incidence and severity of CRS.



Thieblemont C, et al. J Clin Oncol 2022 and EHA oral presentation

OS: Epcoritamab vs Chemotherapy (historical comparison)

Figure 3. Comparison of OS vs SCHOLAR-1



CIT, chemoimmunotherapy; HR, hazard ratio; OS, overall survival.

Salles G et al., ASH 2022, Abstr 4912

OS: Epco vs CAR-T (historical comparison)





Salles G et al., ASH 2022, Abstr 4912

CAR T-cells after BsAb treatment

Patients with aggressive LBCL n=28

Outcomes post-CAR T	R/R LBCL subgroup (n=23)					
CAR T received, % Axi-cel Tisa-cel	72 28					
ORR, %	91.6					
CR	45.8					
PR	45.8					
Median PFS, mo (95% Cl)	3.3 (2.2, NR)					
6-mo PFS, % (95% Cl)	44.6 (22.4, 64.7)					
1-year PFS, % (95% Cl)	37.2 (15.9, 58.7)					
Median DOR, mo (95% CI)	2.4 (1.4, NR)					
1-year DOR, % (95% CI)	40.7 (17.4, 63.1)					



Initial results suggest CAR T may be effective as post-BsAb salvage therapy; however, longer follow-up in larger cohorts is needed

^a n=20 DLBCL, n=2 FL, n=1 Grade 3b FL, n=3 MCL, n=2 other LBCL

axi-cel: axica btagene ciloleucel; BsAb: bis pecific antibody; CAR: chimeric antigen receptor; CD: cluster of differentiation; CI: confidence interval; CL: confidence limit; CR: complete response; DOR: duration of response; NR: not reached; ORR: overall response rate; PD: progressive disease; PFS: progression-free survival; PR: partial response; SD: stable disease; tisacel: tisagenlecleucel

TCE can be combined...

Figure. PFS with Glofit+Pola



DLBCL, diffuse large B-cell lymphoma; Glofit+Pola, glofitamab plus polatuzumab vedotin; HGBCL, high-grade B-cell lymphoma; NE, not estimable; PFS, progression-free survival; PMBCL, primary mediastinal large B-cell lymphoma; TrFL, transformed follicular lymphoma

STARGLO: randomized Phase III trial in ASCT-ineligible patients with R/R DLBCL

R 2:1

Patients R/R DLBCL (N=274)

- R/R DLBCL NOS after ≥1 prior systemic therapy
- Patients with one prior line must be transplant ineligible
- ECOG PS 0–2

Stratification factors

- Relapsed vs refractory disease[‡]
- 1 vs ≥2 prior lines of therapy

Glofit-GemOx (n=183)

Glofitamab plus gemcitabine and oxaliplatin* Step-up dosing in Cycle 1, 30mg administered on Day 1 from Cycle 2 onwards

> Cycles 1–8 (21-day cycles)

Glofitamab 30mg administered on Day 1 of each cycle

Cycles 9-12

R-GemOx (n=91)

Rituximab[†] plus gemcitabine and oxaliplatin Administered on Day 1 of each cycle

*Gemcitabine 1000mg/m² and oxaliplatin 100mg/m². In C1, Gpt administered on D1, GemOx on D2, followed by glofit 2.5mg on D8 and glofit 10mg on D15; in C2–8, glofit 30mg and GemOx are administered on D1. †Rituximab 375mg/m². ‡Relapsed disease: recurrence following a response that lasted ≥6 months after completion of the last line of therapy; refractory disease: disease that did not respond to, or that progressed <6 months after, completion of the last line of therapy. ASCT, autologous stem cell transplant; C, cycle; D, day; ECOG PS, Eastern Cooperative Oncology Group performance status; Gpt, obinutuzumab pre-treatment; NOS, not otherwise specified; R 2:1, patients randomized in a 2:1 ratio.

Primary endpoint: overall survival



Statistically significant and clinically meaningful OS benefit for Glofit-GemOx vs R-GemOx

24-month OS not reported at the primary analysis as data were not sufficiently mature.

*p-value is alpha controlled at the primary analysis and descriptive at updated analysis. CI, confidence interval; HR, hazard ratio; NE, not evaluable.

Response rates by IRC assessment

Response rates at the updated analysis



- 33.2% difference in CR rate between treatment arms (95% CI: 19.7–44.5)
- CR rate significantly better with Glofit-GemOx vs R-GemOx (descriptive p-value <0.0001*)

CR rate was statistically significant at primary analysis, with increased difference between treatment arms at the updated analysis

Difference in duration of CR between treatment arms had not reached statistical significance at the time of analysis. *p-value based on Cochran-Mantel-Haenszel method. ORR, overall response rate; PR, partial response.

Progression-free survival by IRC assessment



Statistically significant and clinically meaningful PFS benefit for Glofit-GemOx vs R-GemOx

12-month PFS not reported at the primary analysis as data were not sufficiently mature. Three patients proceeded to ASCT after study treatment, all three patients are alive as of today. *p-value is alpha controlled at the primary analysis and descriptive at updated analysis. PFS, progression-free survival.

OS in prespecified subgroups

Baseline Risk Factors		R-GemOx (n=91)		Glofit-GemOx (n=183)							
	Total n	'n	Events	Median (Months)	n	Events	Median (Months)	HR	95% Wald Cl	Glofit-GemOx better	R-GemOx better
All Patients	274	91	52	12.9	183	80	25.5	0.62	(0.44, 0.89)		
Sex									1		
Male	158	53	36	10.3	105	51	20.4	0.56	(0.37, 0.86)		
Female	116	38	16	20.2	78	29	NE	0.76	(0.41, 1.40)	F 1 8	
Age group									X X X		
<65	102	35	19	9.0	67	29	NE	0.59	(0.33, 1.06)	-	4
≥65	172	56	33	14.3	116	51	22.9	0.65	(0.42, 1.01)	-	6
Enrollment by geographic region			2.2	0.000		100		CION .	(
Europe	88	26	11	13.8	62	29	21.2	1.09	(0.54, 2.18)	H	÷
North America	25	10	2	NE	15	8	13.3	2.62	(0.56, 12.34)	H-1	
Rest of the World	161	55	39	8.3	106	43	NE	0.41	(0.27.0.64)	• • •	
to, of previous lines of systemic therapy for DLBC	L.							2.04	(a	4	
1	172	57	28	15.7	115	44	NE	0.68	(0.42, 1.09)		
>2	102	34	24	6.7	68	36	18.3	0.55	(0.33, 0.93)		
Prior CAR T-cell therapy	197			2.5		1.22	9070	2.24	1		
Yes	21	8	4	27.8	13	6	13.7	0.84	(0.23, 3.01)		
No	253	83	48	12.9	170	74	NE	0.62	(0.43, 0.89)	· · · · · · · · · · · · · · · · · · ·	
elapse or refractory to last line of therapy			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1.218	1.6				(01.10, 0.00)		
Refractory	166	54	36	7.5	112	61	11.9	0.65	(0.43, 0.99)		
Relapsed	108	37	16	27.8	71	19	NE	0.51	(0.26, 0.98)		
efractory to first line of therapy					2.8				(0.20) 0.00)		
Yes	153	47	34	7.3	106	59	10.2	0.60	(0.40, 0.92)	-	
No	121	44	18	27.8	77	21	NE	0.54	(0.29, 1.01)	+ + +	-
otal number of risk factors for IPI (Derived)	1-1		10	21.00			10-5	0.01	(0.20, 1.01)		
Low (0–1)	61	13	6	NE	48	12	NE	0.41	(0.15, 1.10)	+ a +	
Low-intermediate (2)	70	28	14	18.5	42	16	NE	0.59	(0.28, 1.20)	4 0	
High-intermediate (3)	79	30	20	14.3	49	26	21.2	0.75	(0.42, 1.35)		
High (4–5)	55	17	11	8.3	38	24	8.5	0.92	(0.45, 1.88)		
Unknown	9	3	1	0.6	6	2	NE	0.18	(0.01.2.93)	4	
sulky disease ≥10cm				0.0		-		0.10	(0.01, 2.00)	1	
Yes	37	14	7	11 1	23	13	12.0	0.95	(0.38 2.40)	- 1	
No	236	76	45	13.5	160	67	NE	0.58	(0.40, 0.85)		
Unknown	1	1	0	NE		-		NE	NE		
ell of origin			U	COL.				1000			
ABC	6	2	1	NE	4	2	NE	0.97	(0.09 10.98)		1
GCB	89	29	15	11.1	60	25	NE	0.55	(0 29 1 06)	4 41	4
Non-GCB (by IHC + non-GCB unclassified)	147	48	32	10.9	99	45	25.5	0.60	(0.38, 0.94)		
Unknown	32	12	4	20.2	20	8	NE	0.00	(0.28 3.21)	1	
	02	14	-	20.2	20	5	, inc	0.00	(0.20, 0.21)	Tranten T	

Conclusions

- The CD3/CD20 bispecific antibodies work and work very well
 - Glofitamab: ORR 52%, CRR 40%
 - Epcoritamab: ORR 59%, CRR 41%
 - Regardless of prior therapy or molecular subtype
- The toxicity profile is favorable:
 - Very little CRS > grade 2
- Bispecific antibodies can be combined and sequenced
- Addition of bispecific antibodies can revive salvage chemoimmunotherapy

Faculty Case Presentations



Case Presentation: Dr Sehn

- 58 yo male, no comorbidities
- Presented with abdominal discomfort, ECOG PS 1
- Labs: LDH 350 U/L (ULN 240)
- PET/CT: paravertebral soft tissue mass at T7 with extension into RLL, right pelvic sidewall mass (maximum 6 cm)
- Core biopsy of abdominal mass: DLBCL, GCB subtype, no MYC rearrangement
- Treated with 6 cycles of R-CHOP
- CR on post-treatment PET/CT



Case Presentation: Dr Sehn (cont'd)

- 14 months later, he developed recurrent abdominal pain, PET/CT and biopsy confirmed recurrent DLBCL
- Planned for salvage and ASCT, but had progression after 2 cycles R-GDP
- > 1 cycle Pola-R bridging followed axicabtagene ciloleucel
- CR on PET/CT at 3 months, but progression on PET/CT at 6 months post CAR T-cell therapy
- Recently completed 12 cycles of glofitamab, achieved a CR

QUESTIONS FOR THE FACULTY

For a patient with DLBCL to whom you've decided to administer a bispecific antibody, how to you determine which one to use? How do efficacy, convenience and tolerability factor into the decision?

In what line of therapy do you generally offer a bispecific antibody to patients with DLBCL? Regulatory and reimbursement aside, in what line of therapy would you like to administer bispecific antibodies?

Outside of a clinical trial, are there currently any situations in which you would combine a bispecific antibody with chemotherapy (eg, GemOx) for a patient with relapsed/refractory DLBCL?



Case Presentation: Dr Flowers

- Initially diagnosed with DLBCL at age 56 with extensive retroperitoneal disease and treated on protocol with R-CHOP + X. Tolerated therapy well with the exception of being admitted twice for neutropenic fever. Improved on empiric antibiotics, Cultures negative.
- Experienced relapse at 18 months and received CAR T-cell therapy
- Now returns with a new inguinal LN biopsy proven to be relapsed DLBCL with ABC subtype and here for initiation of next line of therapy

QUESTIONS FOR THE FACULTY

For a patient who is not tolerating your first-choice bispecific antibody, would you switch to another?

In general, how do you sequence bispecific antibodies and CAR T-cell therapy for a patient with DLBCL who is eligible to receive both?



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