



Treatment sequencing in R/R DLBCL: Dissecting the emerging challenge from bench to bedside

Tuesday, 17 June 2025, 16:30 – 18:00

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- The intent is not to provide medical or any other type of advice.
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Faculty disclosures



	Andrew Davies	Romano Danesi	Gloria Iacoboni	Marek Trněný
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Introductions





Prof Andrew Davies (Chair)

University Hospital Southampton, Southampton, UK



Professor Gloria Iacoboni

Vall d'Hebron Institute of Oncology, Barcelona, Spain



Professor Romano Danesi

University of Milan, Milan, Italy



Professor Marek Trněný

Charles University,
Prague, Czech Republic

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Today's agenda





Evolving strategies and challenges in R/R DLBCLAndrew Davies (UK)



Can preclinical data help? Insights from pharmacology Romano Danesi (Italy)



Learnings from clinical trials and RWE Gloria Iacoboni (Spain)



Clinical decision-making in practice
Marek Trněný (Czech Republic)



Treatment sequencing on the horizon: What is next?
Andrew Davies (UK)

Q&A Session and Closing RemarksAll, Andrew Davies (Chair)

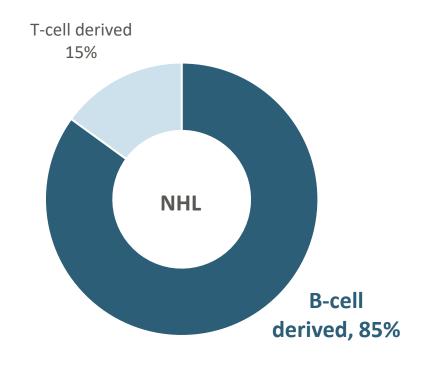
Evolving strategies, evolving challenges in relapsed/refractory diffuse large B-cell lymphoma

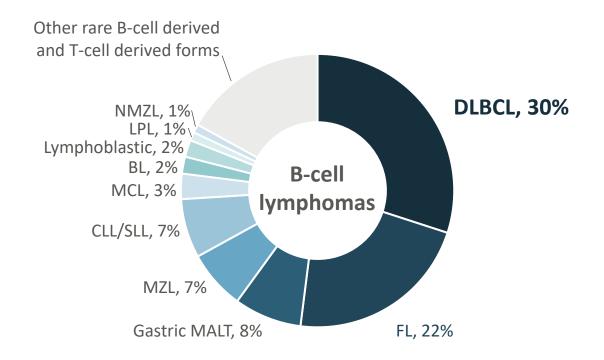
Professor Andrew Davies

University of Southampton, Southampton, United Kingdom

DLBCL is the most common type of mature B-cell neoplasm^{1–3}







The WHO has classified >100 NHL types.

There are 2 major NHL groups arising from transformed B-cells and T-cells¹

Although mature B-cell neoplasms encompass many unique diagnostic subtypes, DLBCL is the most common^{2,3,*}

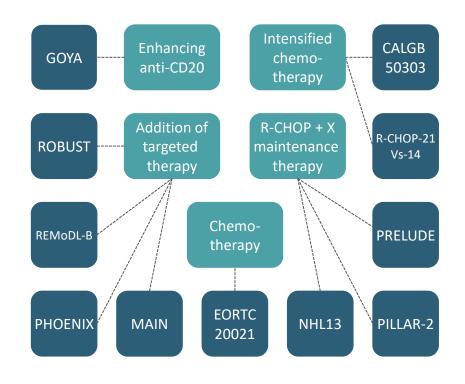
^{*}Pie chart represents the percentages for B- and T-cell derived NHL; T-cell derived types are not distinguished (shown in light grey).

BL, Burkitt lymphoma; CLL, chronic lymphocytic leukaemia; DLBCL, diffuse large B-cell lymphoma; FL, follicular lymphoma; LPL, lymphoplasmacytic lymphoma; MALT, mucosa-associated lymphoid tissue lymphomas; MCL, mantle cell lymphoma; MZL, marginal zone lymphoma; NMZL, nodal marginal zone lymphoma; NHL, non-Hodgkin lymphoma; SLL, small-cell lymphocytic lymphoma; WHO, World Health Organization.

1. Tognon et al. Cancer 2015 2. Ma et al. Haematologica 2022 3. Leukemia and Lymphoma Society 2022.

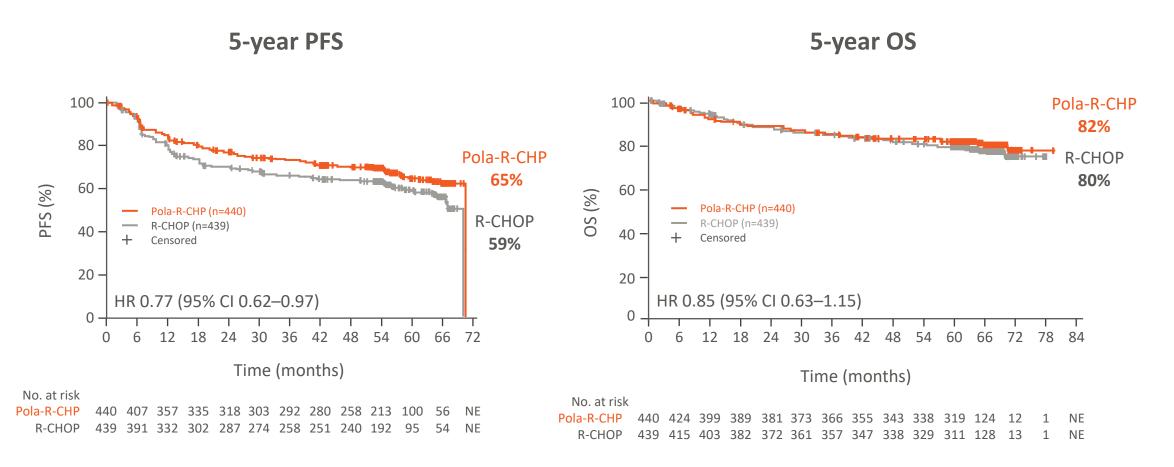
Treatment options for 1L DLBCL had not advanced for 20 years, and many trials failed to show an efficacy benefit¹⁻¹¹





Pola-R-CHP, the only new treatment option approved in 1L DLBCL in recent years¹





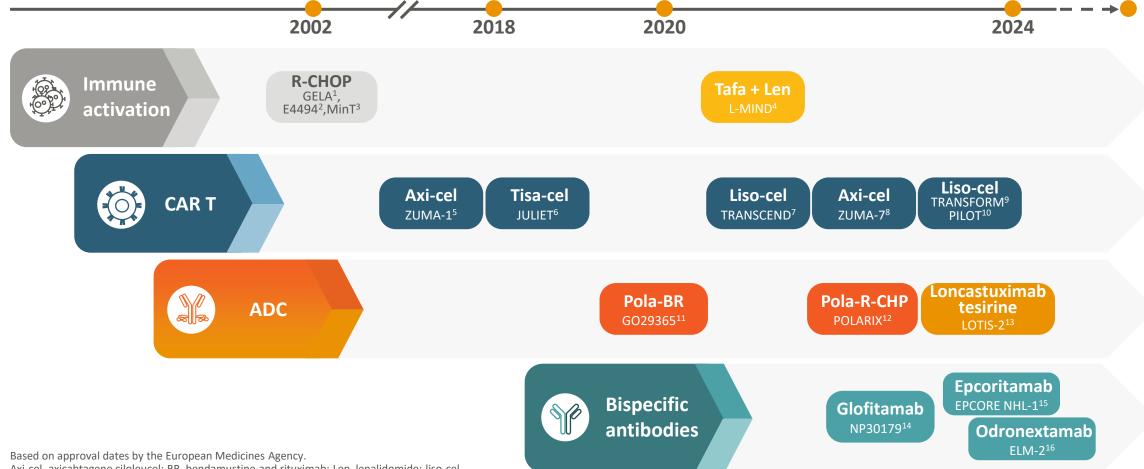
¹L, first-line; CI, confidence interval; DLBCL, diffuse large B-cell lymphoma; HR, hazard ratio; NE, no event; OS, overall survival; PFS, progression-free survival; Pola, polatuzumab vedotin, rituximab, cyclophosphamide, doxorubicin, prednisone; R-CHOP, rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone.

1. Salles et al. ASH 2024; Oral presentation #469.

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Since 2017, nine therapies with varying mechanisms of action and targets have been approved in DLBCL^{1–16}





Axi-cel, axicabtagene ciloleucel; BR, bendamustine and rituximab; Len, lenalidomide; liso-cel,

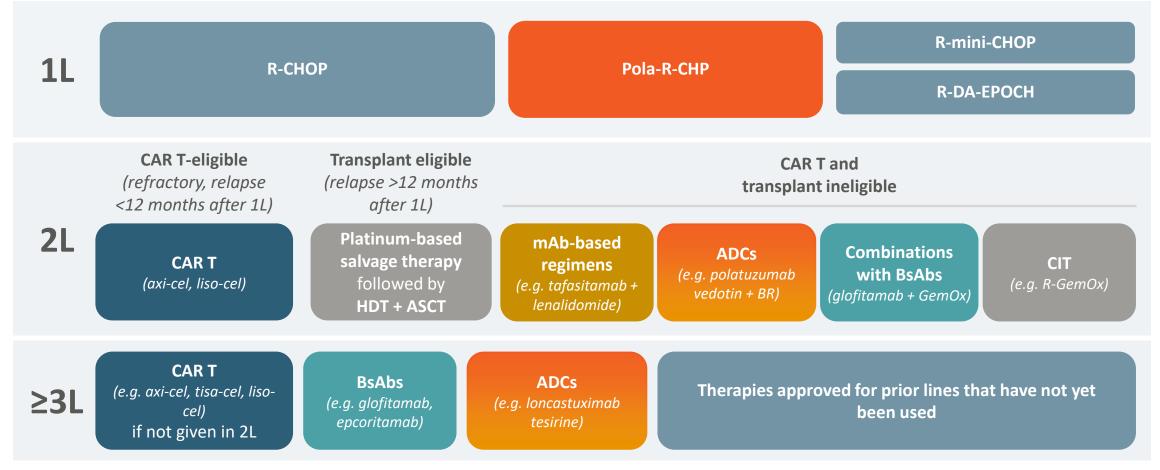
lisocabtagene maraleucel; pola, polatuzumab vedotin; R-CHOP, rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone; tafa, tafasitamab; tisa-cel, tisagenlecleucel. 1. Coiffier et al. N Engl J Med 2002 2. Habermann et al. J Clin Oncol 2006 3. Clinicaltrials.gov NCT00400907 4. Clinicaltrials.gov NCT02399085 5. Clinicaltrials.gov NCT02348216 6. Clinicaltrials.gov NCT02445248 7. Clinicaltrials.gov NCT02631044 8. Clinicaltrials.gov NCT03391466 9. Clinicaltrials.gov NCT03575351 10. Clinicaltrials.gov NCT03483103 11. Clinicaltrials.gov NCT02257567 12. Clinicaltrials.gov NCT03274492 13. Clinicaltrials.gov NCT03575351 10. Clinicaltrials.gov NCT0357551 10. Clinicaltrials.gov NCT03575351 10. Cli

14. Clinicaltrials.gov NCT03075696 15. Clinicaltrials.gov NCT03625037 16. Clinicaltrials.gov NCT03888105.

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Numerous treatment options are now available for DLBCL in each line^{1–9}





ADC, antibody-drug conjugate; ASCT, autologous stem cell transplantation; axi-cel, axicabtagene ciloleucel; BR, bendamustine and rituximab; BsAb, bispecific antibody; CAR T, chimeric antigen receptor T-cell therapy; CIT, chemo-immunotherapy; DLBCL, diffuse large B-cell lymphoma; HDT, high-dose therapy; L, line; liso-cel, lisocabtagene maraleucel; mAb, monoclonal antibody; pola, polatuzumab vedotin; R-CH(O)P, rituximab, cyclophosphamide, doxorubicin, (vincristine), and prednisone; R-DA-EPOCH, rituximab, dose-adjusted etoposide, prednisone, vincristine, cyclophosphamide, and doxorubicin; R-GemOx, rituximab, gemcitabine, and oxaliplatin; tisa-cel, tisagenlecleucel. 1. Sehn & Salles N Engl J Med 2021 2. Frontzek et al. Ther Adv Hematol 2022 3. Peyrade et al. Blood 2010 4. Polivy SmPC 2023 5. Columvi SmPC 2023 6. Tepkinly SmPC 2023 7. Zynlonta SmPC 2023 8. Bartlett et al. J Clin Oncol 2019 9. Roche Press release 2025.

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The changing landscape leads to a paradox of choice¹



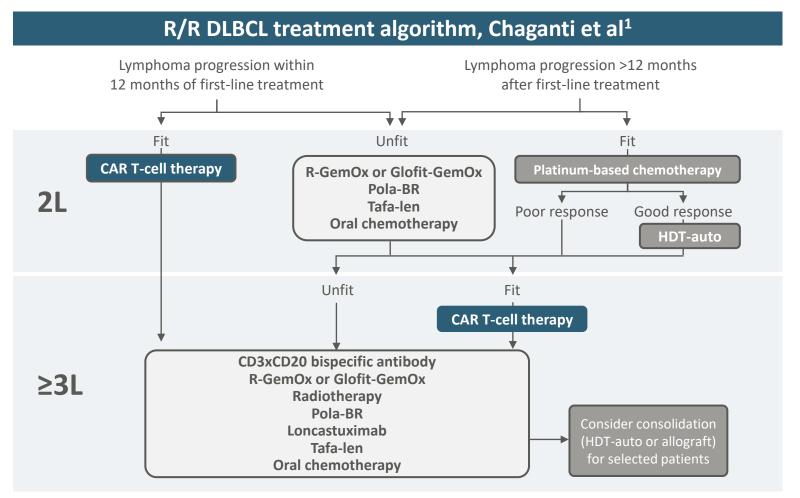
- Treatment options for R/R DLBCL are increasing, but not all therapies are available in all countries
- Many factors, including patient and disease characteristics and prior therapies, should be considered during the treatment journey

Optimal sequencing and combination strategies are yet to be established There is no evidence-based consensus on how to best order these agents



Several treatment algorithms have been proposed, but there is no consensus¹





While CAR-T is now established as a key treatment strategy in 2L, the choice of a sequencing algorithm is highly dependant on availability and location among other factors

2L, second line; 3L, third line; BR, bendamustine and rituximab; CAR-T, chimeric antigen receptor T-cell therapy; DLBCL, diffuse large B-cell lymphoma; GemOx, gemcitabine and oxaliplatin; glofit, glofitamab; HDT-auto, haematopoietic stem cell transplantation with autologous stem cell transplantation; len, lenalidomide; Pola, polatuzumab vedotin; R, rituximab; R/R, relapsed or refractory; Tafa, tafasitamab.

1. Chaganti et al. *Br J Haematol* 2025.

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Many factors impact how we sequence treatments in R/R DLBCL¹



Disease factors

Biomarkers Clinical presentation Refractoriness Antigen expression

Healthcare facility factors

Processing Logistics

Treatment factors

Efficacy Tolerability
Sequencing Cumulative toxicity
Schedule of administration

Patient factors

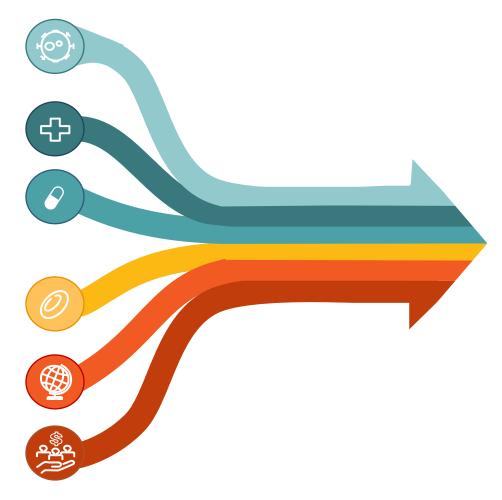
Age Fitness
Comorbidities Patient preference

Geographic factors

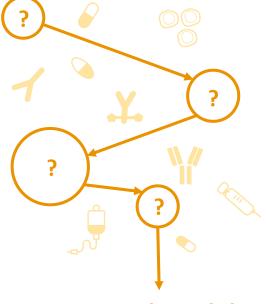
Access to care Drug availability

Socioeconomic factors

Family/social support



Optimal sequence of agents for an individual patient with R/R DLBCL

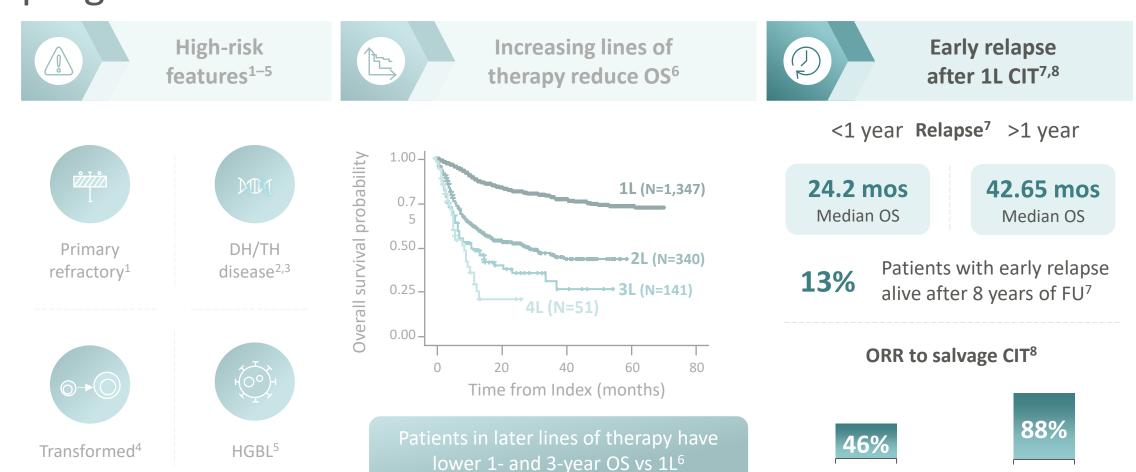


Potential curability

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Treatment challenges in DLBCL: Factors of poor prognosis^{1–8}





Late relapse*

Early relapse*

^{*}Early defined as <1 year after diagnosis, late as >1-year post-diagnosis. CIT, chemo-immunotherapy; DH/TH, double-hit/triple-hit; DLBCL, diffuse large B-cell lymphoma; FU, follow-up; HGBL, high-grade B-cell lymphoma; L, line of therapy; mos, months; ORR, overall response rate; OS, overall survival. 1. Crump et al. *Blood* 2017 2. Herrera et al. *J Clin Oncol* 2017 3. McPhail et al. *Haematologica* 2018 4. Wagner-Johnston et al. *Blood* 2015 5. Olszewski et al. *Blood* 2022 6. Sineshaw et al. *Cancer Med* 2024 7. Chen et al. *Clin Exp Med* 2024 8. Gisselbrecht et al. *J Clin Oncol* 2010.

CAR-T may not be the ultimate solution in R/R DLBCL¹⁻⁵ () SODI



2L CAR-T cell therapies 1-3



PFS post-CAR-T failure in the DESCAR-T registry⁴



Prognostic factors for OS after axi-cel or tisa-cel⁵

Axi-cel¹ Liso-cel²

ORR 83%

87%

PFS 14.7 mo NR

CAR-T therapies significantly improve survival in 2L^{1,2}

tly

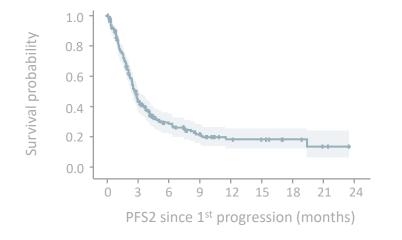
Limitations³



Availability and manufacturing time



Adverse events (e.g. CRS, ICANS)



At risk 238 83 38 23 12 10 5 2

After failing CAR T-cell therapy, mPFS was 2.8 months and mOS was 5.2 months⁴



IPI at apheresis*

≥2 vs 0-1 (HR: 2.18)



Response to CAR-T*

SD/PD vs CR/PR (HR 3.08)



Histotype*
Other vs PMBCL/tFL
(HR: 4.54)



ctDNA

6-mos OS with bispecific antibodies post-CAR-T:
Low ctDNA[†]: 68%
High ctDNA[†]: 20%

A 5-variable tool (ECOG PS, Hb, LDH, EN sites, time from CAR-T to PD) may predict OS post–3L CAR-T⁶

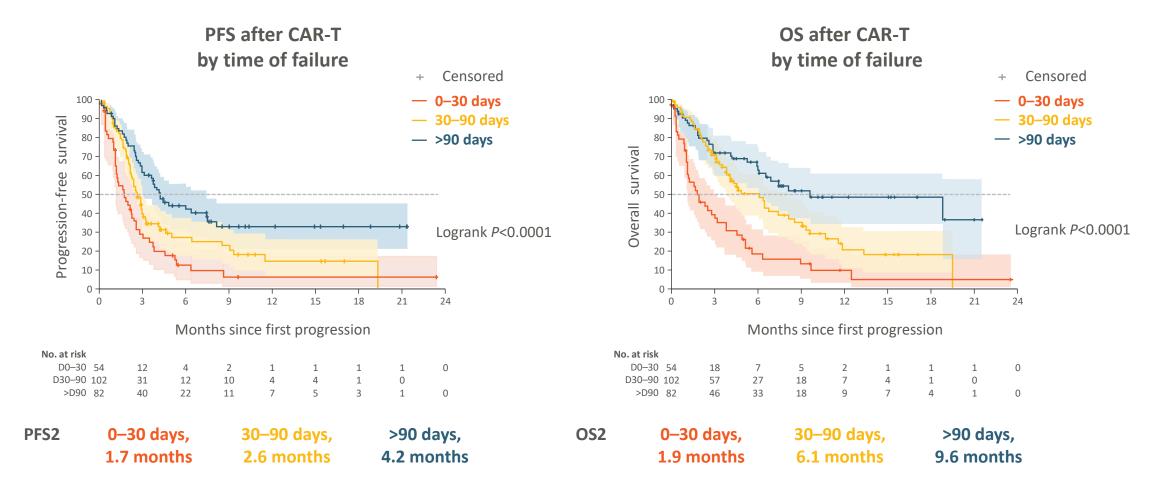
*Using a multivariable Cox model. †Prior to bispecific therapy. Axi-cel, axicabtagene ciloleucel; CAR-T, chimeric antigen receptor T-cell therapy; CR, complete response; CRS, cytokine release syndrome; ctDNA, circulating tumour DNA; ECOG PS, Eastern Cooperative Oncology Group performance status; EN, extranodal; Hb, haemoglobin; HR, hazard ratio; ICANS, immune effector cell-associated neurotoxicity syndrome; IPI, International Prognostic Index; L, line of therapy; LDH, lactate dehydrogenase; liso-cel, lisocabtagene maraleucel; ORR, overall response rate; (m)OS, (median) overall survival; (m)PFS, median progression-free survival; PD, progressive disease; PMBCL, primary mediastinal B-cell lymphoma; PR, partial response; SD, stable disease; tFL, transformed follicular lymphoma; tisa-cel, tisagenlecleucel.

1. Locke et al. N Engl J Med 2022 2. Abramson et al. Blood 2023 3. Duarte C & Kamdar M. Am Soc Clin Oncol Educ Book 2023 4. Di Blasi et al. Blood 2022 5. Dodero et la. Br J Haematol 2024 6. lacoboni et al. J Hematol Oncol 2024.

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Outcomes are particularly poor for patients who progress very early after CAR-T infusion¹



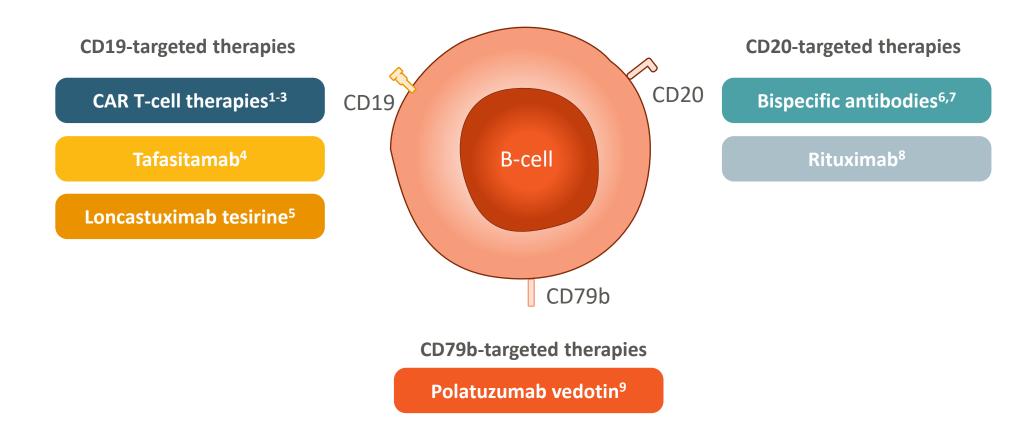


CAR-T, chimeric antigen receptor T-cell therapy; D, day; No., number; OS, overall survival; OS2, overall survival from second-line treatment; PFS, progression-free survival; PFS2, progression-free survival from second-line treatment.

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Antigen expression as a guide to treatment sequencing in DLBCL¹⁻⁹





Can we use CD19-targeted agents before CAR-T?^{1,2}





Impact of CD19 expression post-tafasitamab on response to CAR-T cell therapy¹

12 biopsies of lymph node tumours from the L-MIND study¹ (4 pre- and 8 post-tafasitamab biopsies from six patients)



CD19 expressed in all biopsies



No impact of duration of tafasitamab therapy



No somatic mutations in the CD19 gene and CD19 exon skipping



The dynamics of epitope occupancy are not well characterised



Initial data support retained CD19 expression after treatment with Loncastuximab²

14 patients received CAR-T after Loncastuximab in LOTIS-2 trial

10 paired biopsies were available

10/10 of patients with repeat biopsies* between Loncastuximab tesirine treatment and CAR-T infusion[†] had positive CD19 expression after Loncastuximab tesirine





Median time between Loncastuximab tesirine and CAR-T infusion: **120 days**

^{*10/14} patients had repeat biopsies between Loncastuximab tesirine treatment and CAR-T administration for IHC staining. †Axi-cel: 36%, liso-cel: 21%, tisa-cel: 14%, investigational anti-CD19: CAR-T 29%.

Axi-cel, axicabtagene ciloleucel; CAR-T, chimeric antigen receptor T-cell therapy; CR, complete response; IHC, immunohistochemistry; Len, lenalidomide; liso-cel, lisocabtagene maraleucel; Loncastuximab, loncastuximab tesirine; ORR, overall response rate; PR, partial response; Tafa, tafasitamab; tisa-cel, tisagenlecleucel.

1. Duell et al. Blood 2024 2. Thapa et al. Blood Adv 2020.

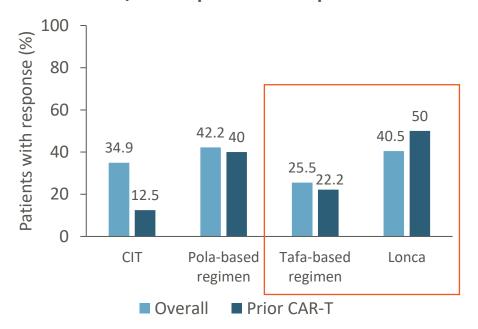
Can we use CD19-targeted agents after CAR-T?¹



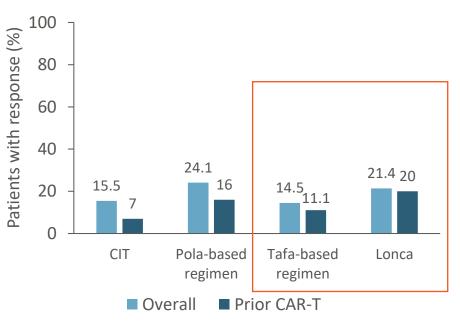


CD19-targeted agents appear to have efficacy when used after CAR-T However, outcomes between therapies cannot be compared as baseline characteristics differed

ORR* to 2L+ treatment overall and in R/R LBCL patients with prior CAR-T



CR* to 2L+ treatment overall and in R/R LBCL patients with prior CAR-T



^{*}Treatment response and progression were abstracted from medical records (e.g., PET/PET-CT/CT scans) and reviewed and validated by an assigned study clinician.

2L, second line; CAR-T, chimeric antigen receptor T-cell therapy; CIT, chemoimmunotherapy; CR, complete response; CT, computed tomography; LBCL, large B-cell lymphoma; Lonca, loncastuximab tesirine; ORR, overall response rate; OS, overall survival; PET, positron emission tomography; Pola, polatuzumab vedotin; R/R, relapsed or refractory; Tafa, tafasitamab.

1. Nastoupil et al. Clin Lymphoma Myeloma Leuk 2025.

What is the importance of CD20 expression in decision making $?^{1-3}$





New data are emerging on the changes in expression of CD20 with novel therapies and on its impact on outcomes, to be further explored¹⁻³

- Poor outcomes after epcoritamab and glofitamab treatment have been observed in patients without detectable CD20, potentially representing an emerging unmet need¹
- CD20 loss was common in patients who relapsed or progressed after glofitamab^{2,3}
- Additional data are needed to understand how this could impact treatment sequencing in DLBCL in the future³

Summary





The treatment landscape of R/R DLBCL has changed extensively in the past few years and new challenges are emerging



Our clinical choices depend on multiple parameters, including patient and disease related factors, guidelines, efficacy and safety and local drug availability



Antigen expression is rising as a new key element for treatment sequencing decisions

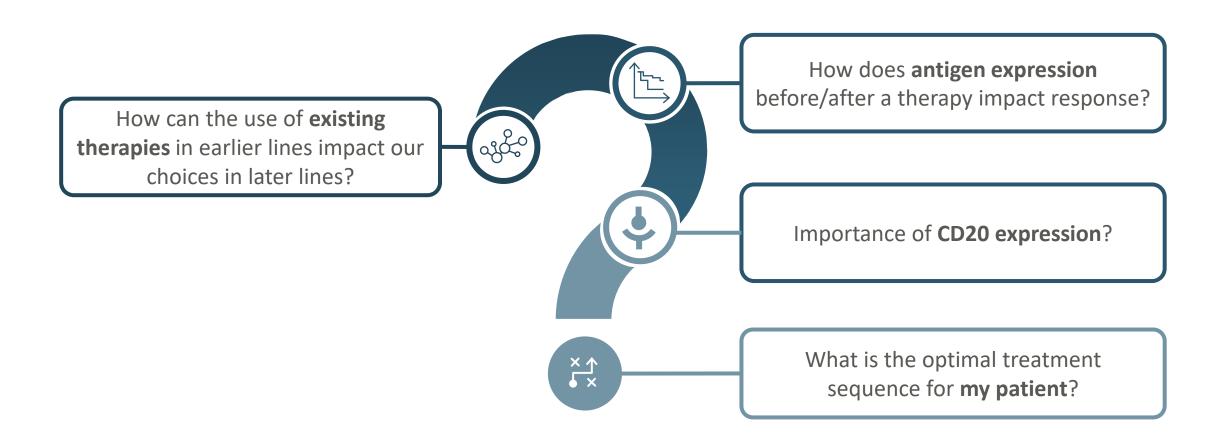


Increasing data are available to support clinical decisions, but key evidence is still missing to confidently navigate treatment sequencing in an increasingly complex environment

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There are many challenges and open questions in DLBCL





Can preclinical data shed a light on treatment sequencing?

Professor Romano Danesi

University of Milan, Milan, Italy



When considering treatment sequencing, how often do you rely on pharmacological properties (drug structure, mechanism of action and pharmacology) to guide your decisions? (Select one)

- A. Always
- B. Often
- C. Occasionally
- D. Rarely
- E. Never



How can preclinical evidence help us in decision-making?



Can we better navigate treatment sequencing?

Pharmacological aspects



- Molecular target
- Structure
- Mechanism of action



Antigen expression

- CD20
- CD19



Can we sequence two drugs targeting the same antigen?

How can preclinical evidence help us in decision-making?



Can we better navigate treatment sequencing?

Pharmacological aspects



- Molecular target
- Structure
- Mechanism of action



Antigen expression

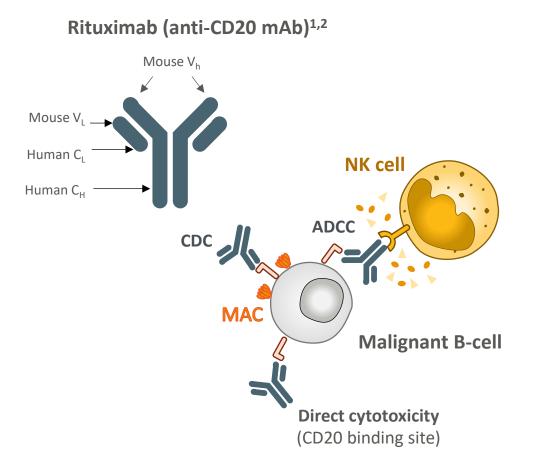
- CD20
- CD19

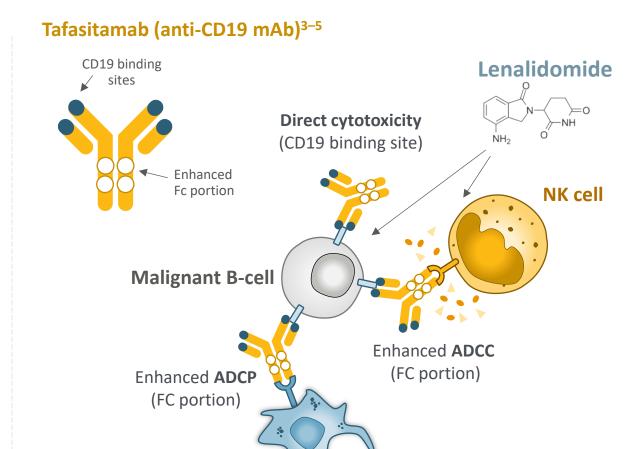


Can we sequence two drugs targeting the same antigen?

Structures and mechanisms of action of unconjugated ("naked") antibodies^{1–5}





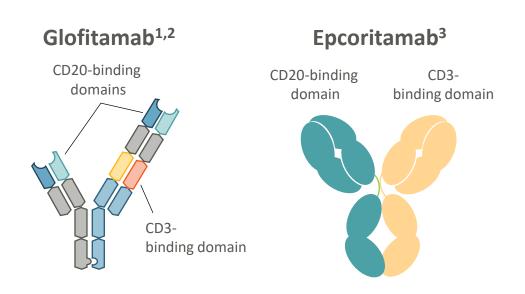


Macrophage

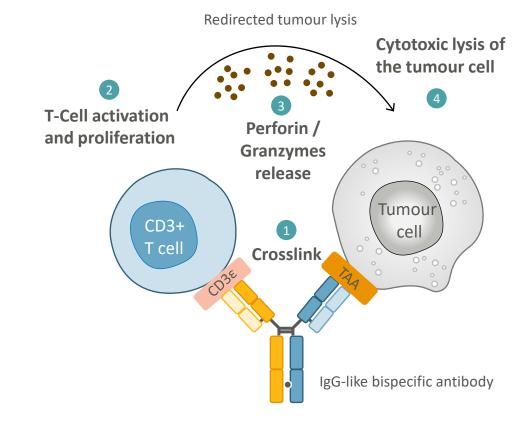
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Structures and mechanisms of action of bispecific antibodies^{1–5}





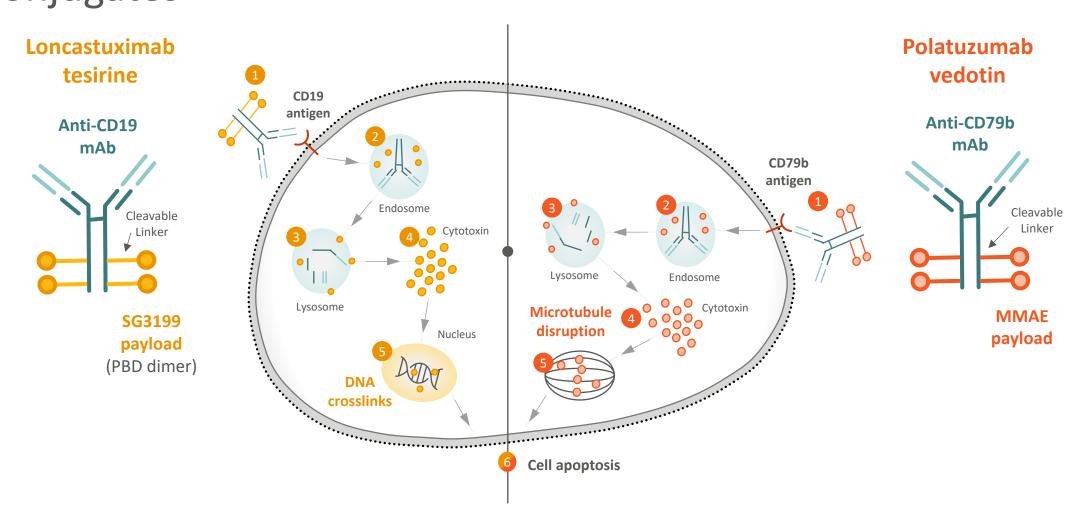
Fully humanised mouse IgG1-based bispecific antibodies which target CD20 and CD3^{1–3}



CD3 bispecific T-cell redirection mechanism of action in cancer immunotherapy^{4,5}

Structures and mechanisms of action of antibody-drug conjugates^{1–2}





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Antibody-drug conjugates have multiple properties that can be varied for clinical efficacy^{1–3}

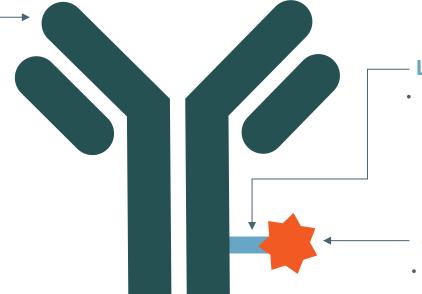


Antibody

 Strong antigen recognition, low immunogenicity, long half-life, and high molecular weight

Target antigen

High tumour expression, low healthy tissue expression, strong antibody recognition



Linker

Stable in circulation, efficient payload release at target site, prevents premature release at non-target tissue, efficient linker technology, and site of conjugation

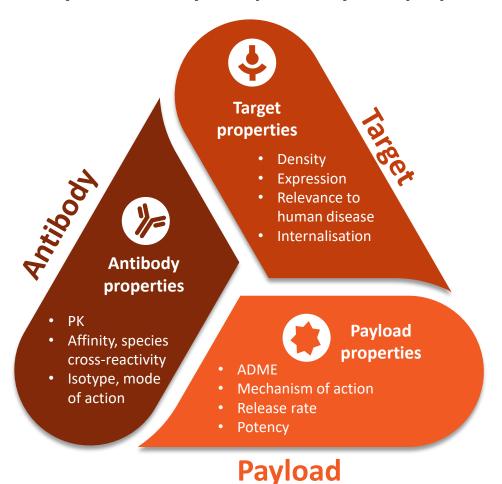
Cytotoxic payload

- Highly potent
- Optimal DAR, which affects drug distribution and PK

Efficacy of ADCs is determined by multiple properties^{1,2} • SODI



Payload delivery is impacted by ADC properties¹



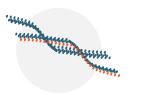
Efficacy may also be limited by drug resistance²



Downregulation of the target antigen



Defects in binding/internalisation



Alterations in microtubule dynamics

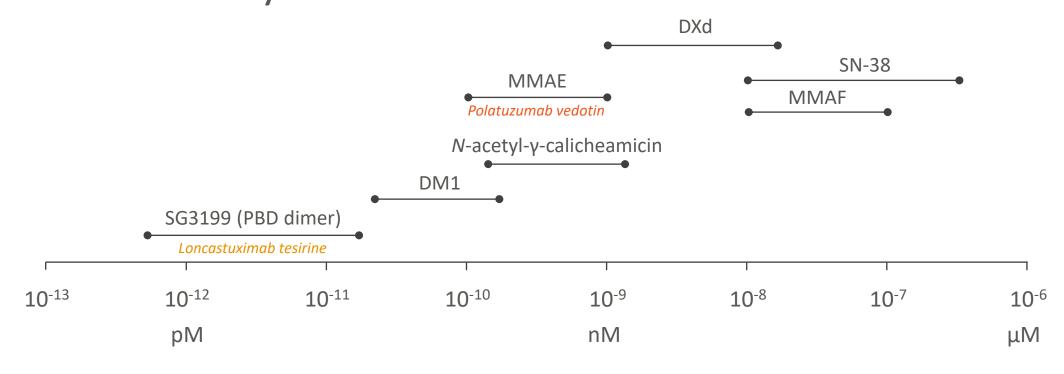


Reduced drug retention

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Target antigen density and payload potency impact clinical efficacy of ADCs¹





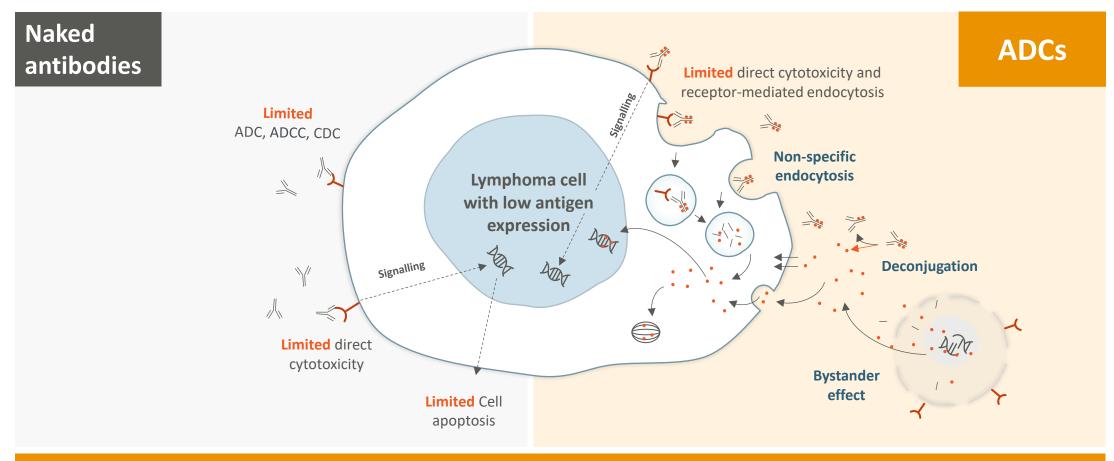
Approximate payload potency (IC₅₀, M)

High potency

Low potency

ADCs have additional mechanisms to overcome low antigen expression and deliver their potent payload^{1,2}



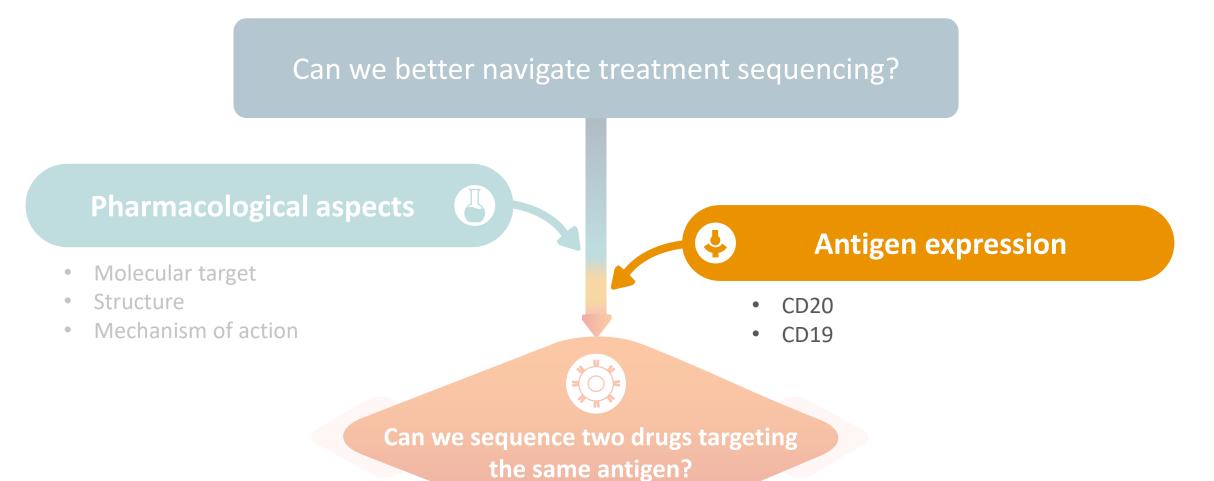


ADCs must balance the **potency** of the payload with the **density** of target antigen expression to achieve **optimal clinical activity**¹

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How can preclinical evidence help us in decision-making?





In vitro CD20 expression appears not to be correlated with bispecific antibody activity^{1–3}



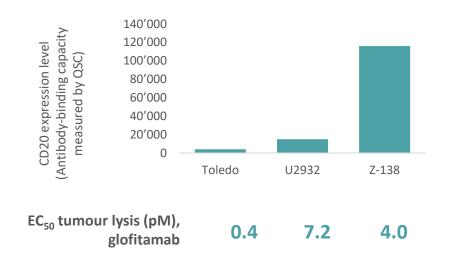


Glofitamab demonstrated anti-tumour activity in cells expressing low levels of CD20^{1,2}

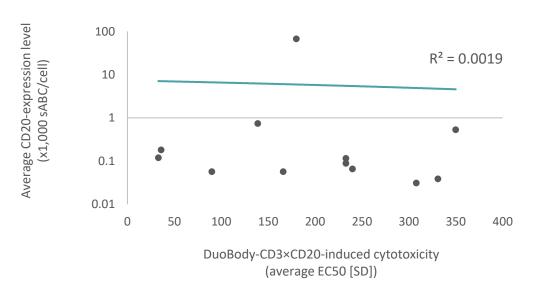


There was no relationship observed between CD20 expression and cytotoxicity of epcoritamab in cells³

Tumour cell lines CD20 expression and EC₅₀ values of tumour cell lysis



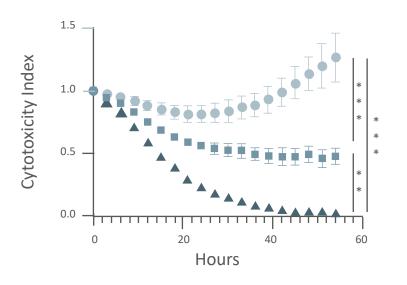
Correlation between CD20 expression and CD3×CD20induced cytotoxicity



CD19 CAR-T activity in preclinical models is dependent on antigen density¹

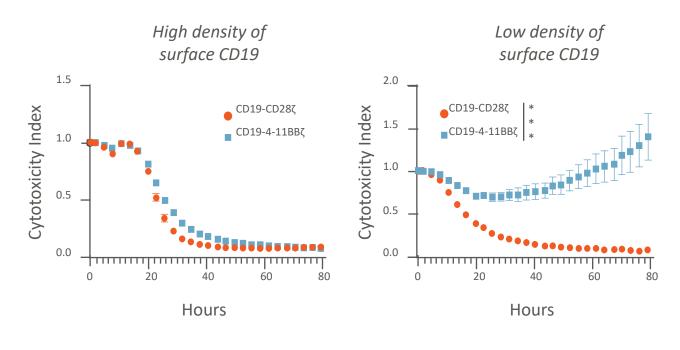


Tumour cell killing of CD19–4-1BBζ depends on the density of surface CD19



- Low density of surface CD19
- Moderate density of surface CD19
- High density of surface CD19

CD19–CD28ζ was more efficient at targeting CD19-low tumour cells than CD19-4-1BΒζ*



^{*}Neither of the constructs employed in the study completely match the manufacturing processes for the FDA approved clinical products. **p<0.001. ***p<0.0001. Axi-cel, axicabtagene ciloleucel; CAR-T, chimeric antigen receptor T-cell therapy; FDA, food and drug administration; tisa-cel, tisagenlecleucel.

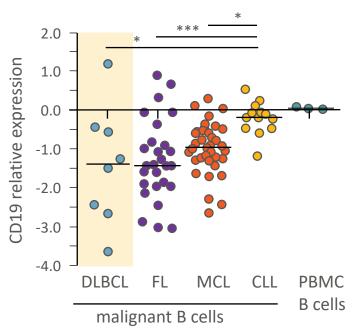
1. Majzner et al. Cancer Discov 2020.

In vitro activity of tafasitamab shows no correlation with CD19 levels^{1–2}





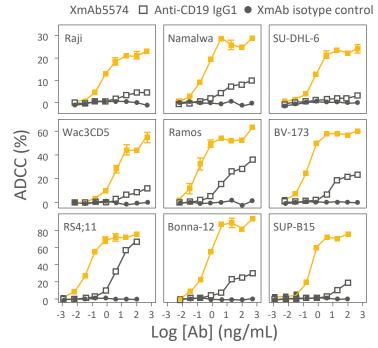
CD19 expression in lymphoma cells can be heterogeneous in DLBCL¹



CD19 protein expression, relative to healthy donor PBMC B-cells (Log2 scale)



Tafasitamab showed no correlation with CD19 expression²



Tafasitamab enhanced ADCC in tumour cell lines with different CD19 expression levels

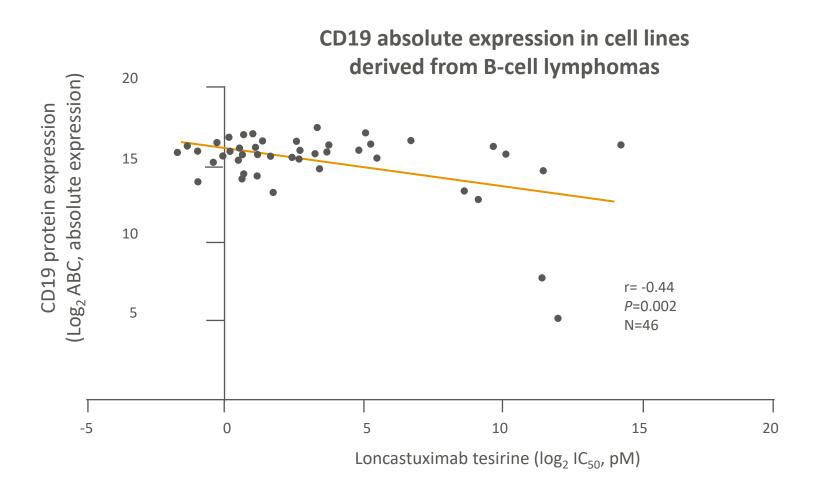
^{*} p<0.05. *** p<0.001.

ADCC, antibody-dependent cell-mediated cytotoxicity; DLBCL, diffuse large B-cell lymphoma; EC₅₀, half maximal effective concentration; FL, follicular lymphoma; MCL, mantle cell lymphoma; PBMC, peripheral blood mononuclear cell; tafa, tafasitamab.

^{1.} Majzner et al. Cancer Discov 2020 2. Horton et al. Cancer Res 2008.

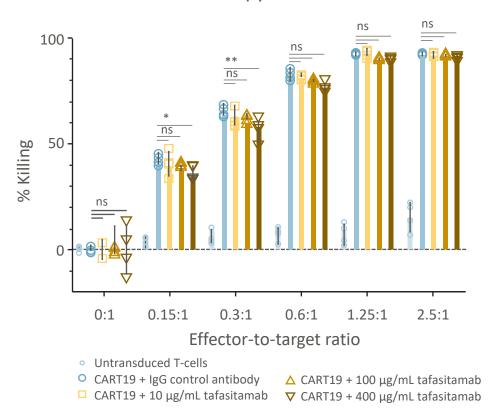
In vitro antitumour activity of Loncastuximab shows a low correlation with CD19 levels¹



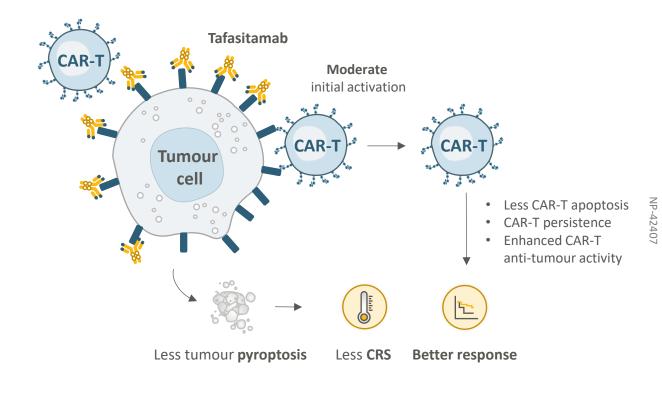


CD19-directed therapies may not decrease the efficacy of subsequent CAR-T cell therapy 1

Prior treatment with tafasitamab does not impact CAR T-cell therapy functions in cells[†]



Sequential therapy of tafasitamab followed by CAR T-cell therapy increased the therapeutic index of CAR T-cell therapy in mice

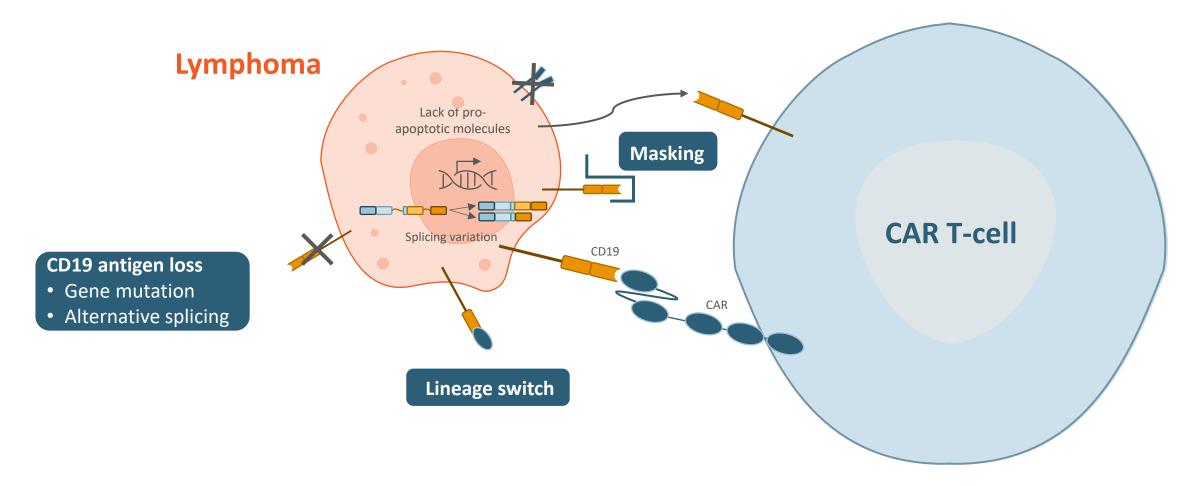


^{*}p<0.05. **p=0.01. †Antigen specific killing, degranulation, cytokine production or proliferation of CART19. CAR-T, chimeric antigen receptor T-cell therapy; CRS, cytokine release syndrome; tafa, tafasitamab.

1. Sakemura et al. *Blood* 2023.

Multiple mechanisms can lead to loss of CD19 expression after CAR-T cell therapy¹





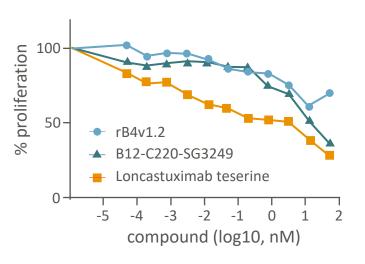
VP-4240

CD19-directed therapies may be effective after progression post-CAR-T^{1,2}



Lonca was investigated in xenograft cells from a patient who progressed following CD19-targeting CAR-T

MTT results for Lonca, rB4v1.2, and B12-C220SG3249



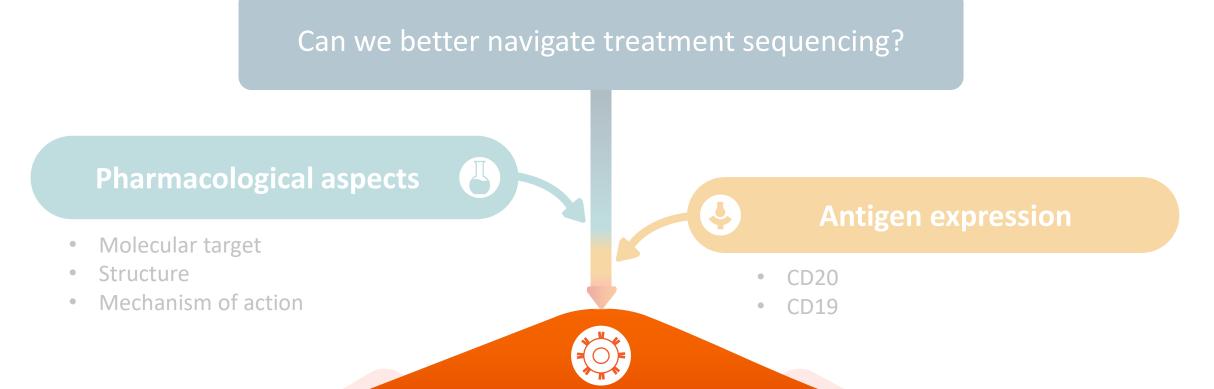
- Surface CD19: 26.72-fold vs isotype
- Antiproliferative activity of lonca: Maintained (IC50=0.7 nm)
- Cell sensitivity to SG3199: Maintained (IC50=0.37 pm)

Loncastuximab tesirine is active in lymphoma cells following chimeric antigen receptor T-cell therapy

7-42407

How can preclinical evidence help us in decision-making?





Can we sequence two drugs targeting

the same antigen?

Summary





Preclinical insights may help fill gaps in the clinical data and understand how antigen expression change after treatment



ADCs' unique pharmacological features may limit their impact on antigen expression and make them less sensitive to antigen loss



As new therapies emerge and others move to earlier lines, careful considerations for antigen re-expression, drug target engagement and potency may help in sequencing

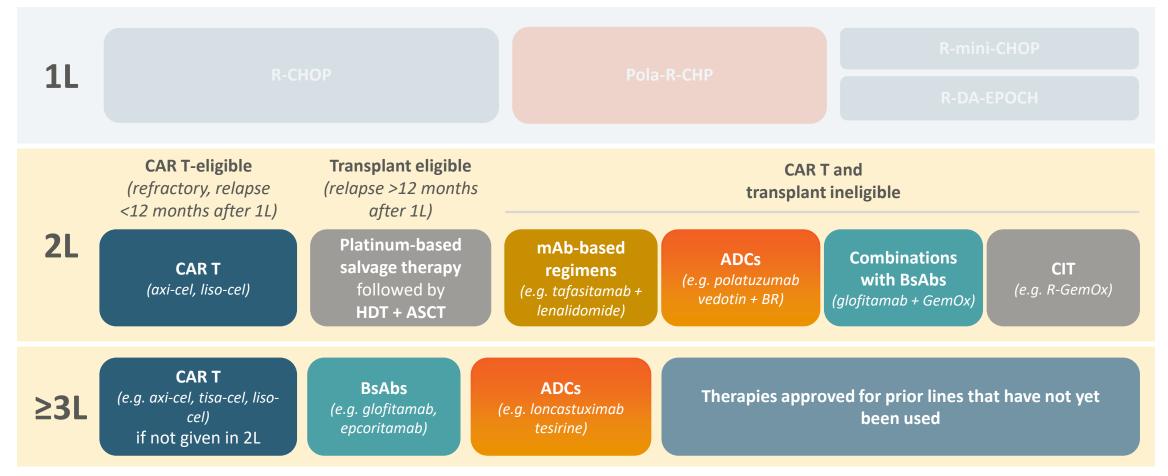
Learnings from clinical trials and real life

Professor Gloria Iacoboni

Vall d'Hebron Institute of Oncology, Barcelona, Spain

Numerous treatment options are now available for DLBCL in each line^{1–9}





ADC, antibody-drug conjugate; ASCT, autologous stem cell transplantation; axi-cel, axicabtagene ciloleucel; BR, bendamustine and rituximab; BsAb, bispecific antibody; CAR T, chimeric antigen receptor T-cell therapy; CIT, chemo-immunotherapy; DLBCL, diffuse large B-cell lymphoma; HDT, high-dose therapy; L, line; liso-cel, lisocabtagene maraleucel; mAb, monoclonal antibody; pola, polatuzumab vedotin; R-CH(O)P, rituximab, cyclophosphamide, doxorubicin, (vincristine), and prednisone; R-DA-EPOCH, rituximab, dose-adjusted etoposide, prednisone, vincristine, cyclophosphamide, and doxorubicin; R-GemOx, rituximab, gemcitabine, and oxaliplatin; tisa-cel, tisagenlecleucel. 1. Sehn & Salles N Engl J Med 2021 2. Frontzek et al. Ther Adv Hematol 2022 3. Peyrade et al. Blood 2010 4. Polivy SmPC 2023 5. Columvi SmPC 2023 6. Tepkinly SmPC 2023 7. Zynlonta SmPC 2023 8. Bartlett et al. J Clin Oncol 2019 9. Roche Press release 2025.

CAR-T is the new 2L standard of care for patients who relapse within 12 months after first-line therapy^{1–3}

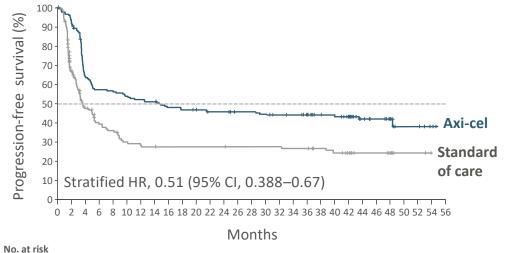


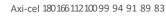


Axi-cel vs standard of care in 2L1



Liso-cel vs standard of care in 2L^{2,3}



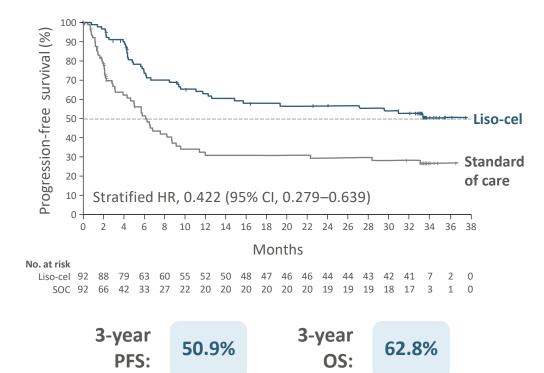


Axi-cel 18016611210099 94 91 89 83 81 79 77 77 73 73 71 68 67 63 54 52 45 32 29 22 7 7 3 0 SOC 179 94 61 47 43 35 33 32 31 31 31 31 31 30 30 30 30 29 29 25 23 18 10 10 8 4 4 0

4-year PFS:

4-year OS:

55%



Median follow-up of 47.2 months (range, 39.8–60.0) for axi-cel¹, and 33.9 months (range, 0.9–53.0) for liso-cel². CAR T-cell therapies were first approved in R/R DLBCL as a 3L of therapy. 2L, second line; 3L, third line; axi-cel, axicabtagene ciloleucel; CAR T, chimeric antigen receptor T-cell therapy; DLBCL, diffuse large B-cell lymphoma; liso-cel, lisocabtagene maraleucel; OS, overall survival; PFS, progression-free survival; R/R, relapsed or refractory.

However, many patients who are eligible to receive CAR T-cell therapies do not receive an infusion^{1–9}



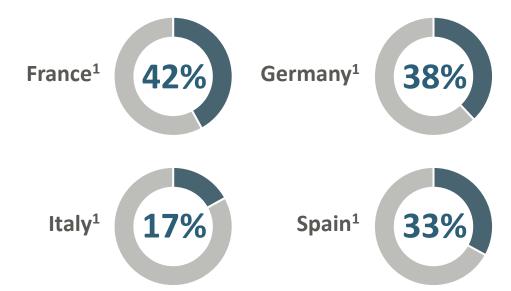


Among patients meeting the EMA label indication for CAR T-cell therapy, less than half received a CAR T-cell therapy infusion



Common challenges resulting in limited access or delays in CAR T-cell therapy

CAR T-cell therapy use in DLBCL in four European countries¹





Patient selection criteria²



Manufacturing issues⁶



Cost and reimbursement issues^{3,4}



Time to infusion7



Requirements for centres⁵

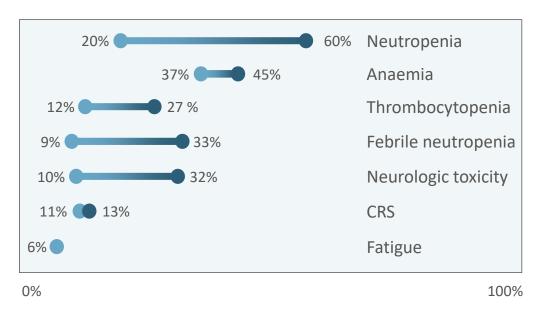


Risk of relapse and toxicities^{8,9}

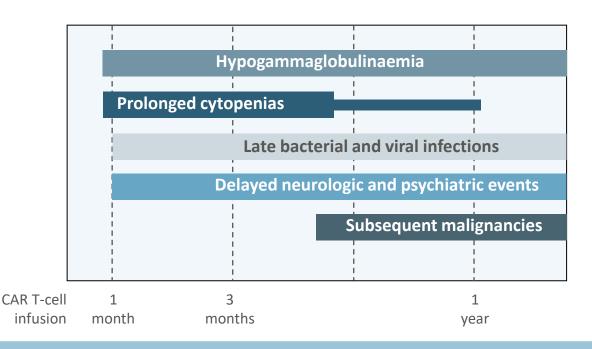
CAR-T cell therapy safety is well understood, but may result (9) SODI in long-term toxicities, potentially impacting sequencing^{1–10}



Most common (≥5%) Grade ≥3 adverse events of special interest in pivotal trials with CAR T-cell therapies^{1–3}







Real-world safety for CAR T-cell therapy is broadly similar to findings from pivotal studies^{5–10}

CAR-T, chimeric antigen receptor T-cell therapy; CRS, cytokine release syndrome.

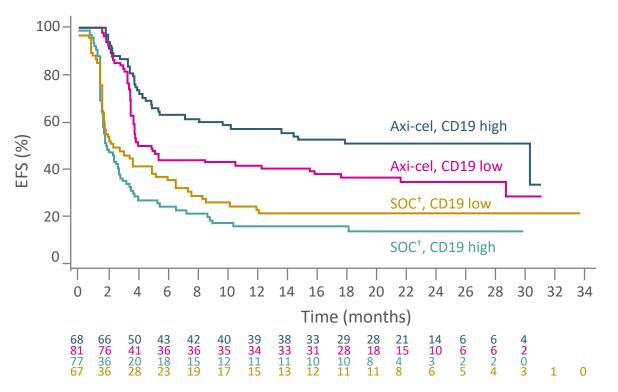
^{1.} Locke et al. Lancet Oncol 2019 2. Abramson et al. Lancet 2020 3. Schuster et al. Lancet Oncol 2021 4. Chakraborty et al. Transplant Cell Ther 2021 5. Kuhnl et al. Blood 2024 6. Yan et al. Blood 2024 7. Lee et al. Blood 2024 7. 8. Bobillo et al. Blood 2024 9. Ahmed et al. ASH 2024; Oral presentation #472 10. Montoto et al. Blood 2024.

CD19 expression and CAR-T therapy: What do we know?^{1–6}





Currently available data support a correlation between CD19 expression levels and CAR T-cell therapy outcomes¹





Loss or downregulation of CD19 can be seen after CAR-T

- Loss of CD19 expression may be a mechanism for relapse in patients with DLBCL after CAR-T²
- 6–30% patients show CD19 loss or downregulation^{3–5}
- However:
 - Limitations exist with current techniques and different approaches (e.g. qPCR) may improve CD19 evaluation⁶
 - CD19 expression at CAR-T failure is not predictive of refractoriness or relapse⁴
 - Tumours may still be susceptible to further CD19-targeted agents

^{*}SOC defined as 2–3 cycles of protocol-defined, investigator-selected, platinum-based chemotherapy with intention to subsequently undergo high-dose chemotherapy with autologous stem cell transplantation for chemosensitive patients. Axi-cel, axicabtagene ciloleucel; CAR-T, chimeric antigen receptor T-cell; EFS, event-free survival; qPCR, quantitative polymerase chain reaction; R/R, relapsed or refractory; SOC, standard of care.

1. Locke et al. Nat Med 2024 2. Shalabi et al. Haematologica 2018 3. Spiegel et al. Blood 2021 4. Tomas et al. Leukemia 2023 5. Plaks et al. Blood 2021 6. Hernani et al. EJHaem 2025.



Which of the following therapies have you used most frequently after CAR-T failure in R/R DLBCL? (Select one)

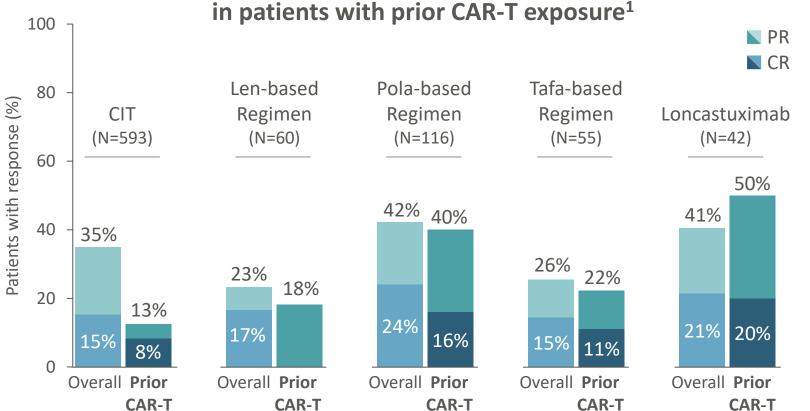
- A. Lenalidomide +/- tafasitamab
- B. ADC: Loncastuximab tesirine
- C. ADC: Polatuzumab vedotin + BR
- D. Bispecific antibody: Glofitamab
- E. Bispecific antibody: Epcoritamab
- F. Chemoimmunotherapy
- G. Other



A growing body of evidence may help us understand how to sequence therapies, particularly after CAR-T¹







Multisite retrospective observational study of adults with R/R LBCL treated with CIT* or novel therapy¹

Baseline characteristics varied considerably between treatments¹

^{*}Treatment response and progression were abstracted from medical records (e.g., PET/PET-CT/CT scans) and reviewed and validated by an assigned study clinician.

CAR-T, chimeric antigen receptor T-cell therapy; CIT, chemoimmunotherapy; CR, complete response; CT, computed tomography; LBCL, large B-cell lymphoma; Len, lenalidomide; Loncastuximab, loncastuximab tesirine; ORR, overall response rate; PET, positron emission tomography; Pola, polatuzumab vedotin; R/R, relapsed or refractory; Tafa, tafasitamab.

1. Nastoupil et al. Clin Lymphoma Myeloma Leuk 2024.

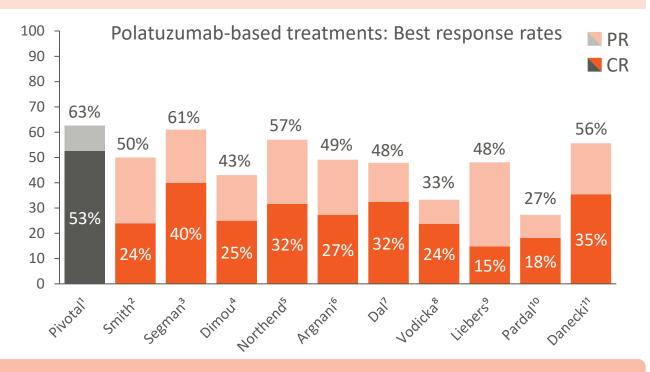
Polatuzumab vedotin + BR in R/R DLBCL: Pivotal data and RWE¹⁻¹¹





Compared to the pivotal study¹, patients treated with polatuzumab vedotin in the real world are more likely to be treated in later lines and to have received prior CAR-T therapies^{1–11}

	Pivotal study ¹	RWE ^{2–11}
Median age (range), years	67 (33–86)	(17–88)
ECOG PS ≥2, %	15	9–51
Median (range) of prior LoT, n	2 (1–7)	(1–9)
Refractory to last therapy, %	75	23–87
Prior CAR-T, %	NA	9–26
mPFS, months	9.2	2.0-11.6
mOS, months	12.4	5.0-9.0



Old and new challenges: Bendamustine impact on T-cell fitness; Polatuzumab re-challenge after use in 1L

BR, bendamustine and rituximab; CAR-T, chimeric antigen receptor T-cell therapy; CR, complete response; ECOG PS, Eastern Cooperative Oncology Group performance status; LoT, line of therapy; mOS, median overall survival; mPFS, median progression-free survival; ORR, overall response rate; PR, partial response; RWE, real-world evidence.

^{1.} Sehn et al. J Clin Oncol 2020 2. Smith et al. Clin Lymphoma Myeloma Leuk 2021 3. Segman et al. Leuk Lymphoma 2021 4. Dimou et al. Hematol Oncol 2021 5. Northend et al. Blood Adv 2022 6. Argnani et al. Hemasphere 2022 7. Dal et al. Ann Hematol 2023 8. Vodicka et al. EHA 2024; Abstract #P1182.

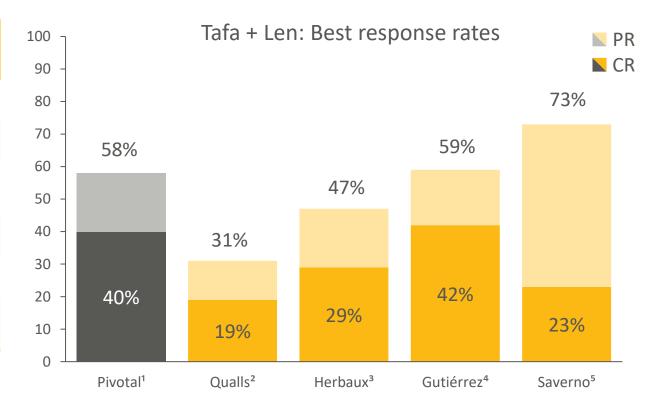
Tafasitamab + lenalidomide in R/R DLBCL: Pivotal data and RWE¹⁻⁵





Clinical trial¹ and real-world data^{2–5} show a better efficacy of tafasitamab + lenalidomide in earlier lines and in lower risk disease

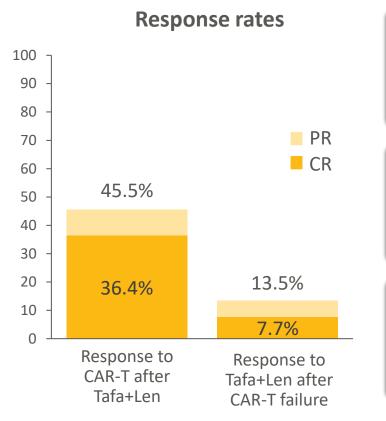
	L-MIND ¹	RWE ^{2–5}
Median age (range), years	72 (41–86)	(32–93) ³
IPI 3–5, %	51	71–81
Median (range) of prior LoT, n	2 (1–4)	(1–13)
Refractory to last therapy, %	43	72 ²
mPFS, months	11.6	4.7–11.3
mOS, months	33.5	10.0–Not reached



-42408

CD19 expression after tafasitamab seems to be maintained, however, efficacy after CAR-T remains poor^{1,2}

	Tafa+Len before CAR-T ^{1,*}	
Number of patients	15	52
Median age (range), years	71 (47–80)	65.5 (20–81)
Median (range) of prior LoT, n	3 (2–7)	2 (1–6)
mPFS, months	3.0	3.0
mOS, months	8.0	4.7



Only 2/15 patients received Tafa+Len as the last line of therapy before CAR-T

Better outcomes for patients starting
Tafa+Len more than 6 months after CAR-T

CD19 epitope masking by tafasitamab may lead to delays in subsequent use of CAR T-cell therapy²

Tafasitamab + lenalidomide efficacy immediately before CAR-T remains to be elucidated; outcomes after CAR-T failure seem poor¹

^{*}Use of tafa+len at any time before CAR-T. CAR-T, chimeric antigen receptor T-cell therapy; CR, complete response; Len, lenalidomide; mOS, median overall survival; mPFS, median progression-free survival; PR, partial response; R/R, relapsed or refractory; Tafa, tafasitamab.

^{1.} Camus et al. Blood Adv 2024 2. Fitzgerald et al. Leuk Lymphoma 2022.

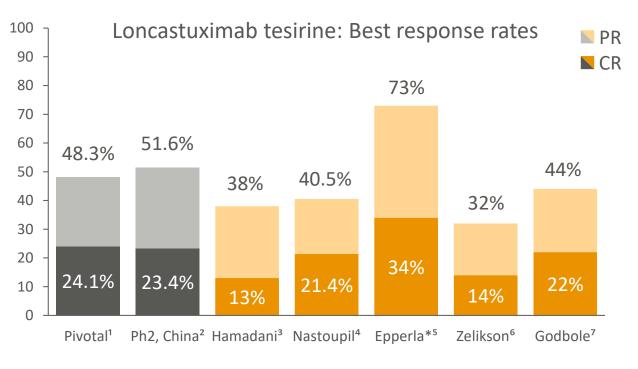
Loncastuximab tesirine as a single agent in R/R DLBCL: Pivotal data and RWE¹⁻⁷





Compared to the LOTIS-2 study¹, real-world cohorts were enriched with higher risk (DH/TH, HGBL), more heavily pretreated patients and later lines of therapy^{3–7}

	LOTIS-2 study ¹	Ph2 study, China ²	RWE ^{3–7}
Median age (range), years	66 (22–94)	60 (26–81)	(24–86)
ECOG PS ≥2, %	6	7.8	26 - 33 ^{2,5}
Median (range) of prior LoT, n	3 (2–7)	3 (2–12)	(2-7)
Prior CAR-T, %	10	6.3	47.6–100
mPFS, months	4.9	5.0	2.1–NR
mOS, months	9.5	9.3	4.6-NR



^{*}Outcomes shown for patients with R/R DLBCL who initiated loncastuximab monotherapy as their 3L treatment after progressing on 2L CAR-T. CAR-T, chimeric antigen receptor T-cell therapy; DH, double-hit; DLBCL, diffuse large B-cell lymphoma; ECOG PS, Eastern Cooperative Oncology Group performance status; HGBL, high-grade B-cell lymphoma; LoT, lines of therapy; mOS, median overall survival; mPFS, median progression-free survival; NR, not reached; ORR, overall response rate; Ph2, Phase 2 study; PR, partial response; R/R, relapsed/refractory; RWE, real-world evidence; TH, triple-hit.

^{1.} Caimi et al. Lancet Oncol 2021 2. Lin et al. Haematologica 2025 3. Hamadani et al. eJHaem 2024 4. Nastoupil et al. Clin Lymphoma Myeloma Leuk 2024 5. Epperla et al. Blood Cancer J 2024 6. Zelikson et al. Haematologica 2025 7. Godbole et al. Blood 2024.

Loncastuximab before CAR-T does not seem to impact outcomes^{1,2}

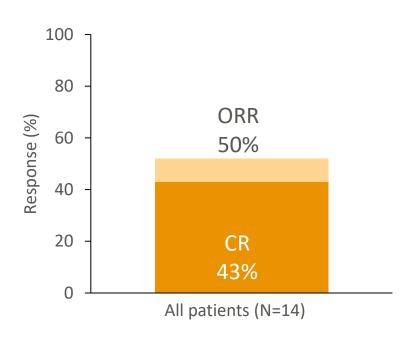


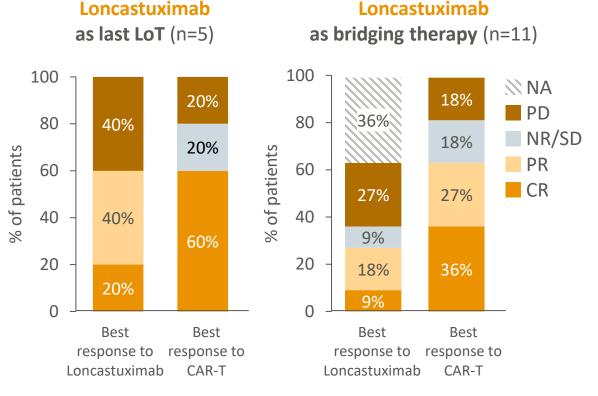


In clinical studies, CAR-T cell therapy efficacy is maintained after Loncastuximab^{1,*}



Similarly in RWE, CAR-T responses seem not impacted by previous Loncastuximab²





^{*14} patients from LOTIS-1 and LOTIS-2 received CAR-T after relapsing or progressing with Loncastuximab. CAR-T, chimeric antigen receptor T-cell therapy; CR, complete response; Loncastuximab, loncastuximab tesirine; LoT, line of therapy; NA, not assessed; NR, no response; PD, progressive disease; ORR, overall response rate; PR, partial response; R/R, relapsed or refractory; SD, stable disease.

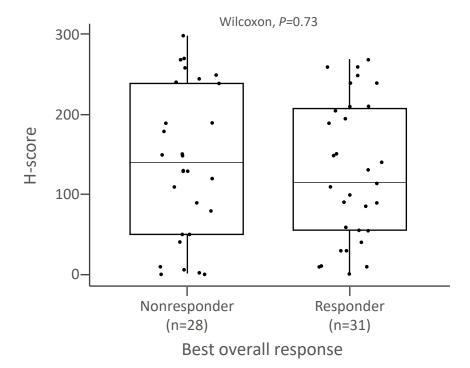
1. Thapa et al. Blood Adv 2020 2. Hamadani et al. EJHaem 2024.

Loncastuximab use after CAR-T: Data from clinical trials^{1,2} (1) SODI



Responses to Loncastuximab were also seen in patients with low CD19 expression¹

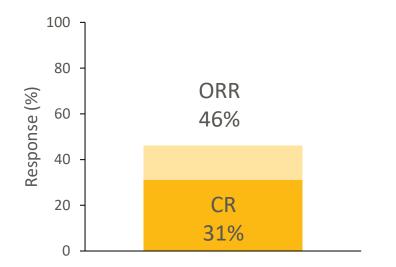
Baseline tumour CD19 H-score by response to Loncastuximab* (N=59)[†]





Patients responded to Loncastuximab treatment after CAR-T²

13 patients from LOTIS-2 had received prior CAR-T[‡]; 5 responded and 1 had stable disease after CAR-T



Response to Lonca[†] was seen in **6/13 (46.2%)** patients already treated with CAR T-cell therapy

^{*}In 59 patients with any prior systemic therapies, 10 patients received CD19-directed CAR-T as their last therapy. Patients who had received previous CD19-directed therapy must have had a biopsy confirming CD19 protein expression after completion of the CD19-directed therapy. †Independent assessment. ‡CD19 expression was required per protocol, but no prior CAR-T patients failed screening due to a lack of CD19. CAR-T, chimeric antigen receptor T-cell therapy; CR, complete response; H-score, HistoScore; Loncastuximab, loncastuximab tesirine; ORR, overall response rate; PR, partial response.

1. Caimi et al. eJHaem 2023 2. Caimi et al. Clin Lymphoma Myeloma Leuk 2022.

Loncastuximab use after CAR-T: Retrospective chart review¹





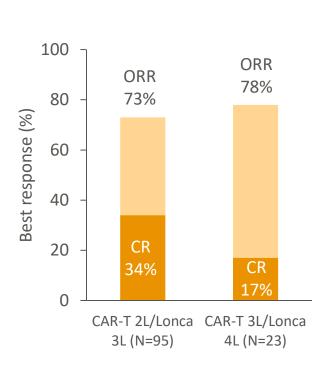
Best response to Loncastuximab as a single agent in 3L and 4L post CAR-T

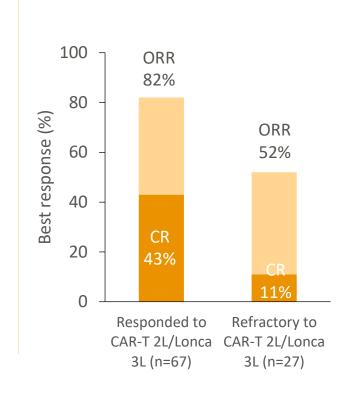


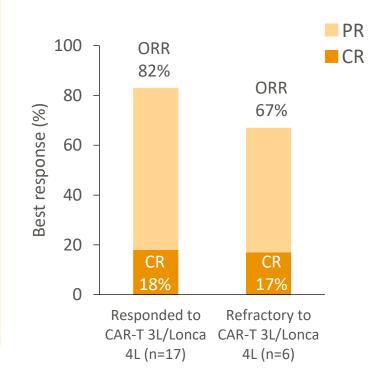
In 3L Loncastuximab showed effectiveness after CAR-T failure



Loncastuximab showed effectiveness in 4L after CAR-T failure (small cohort)



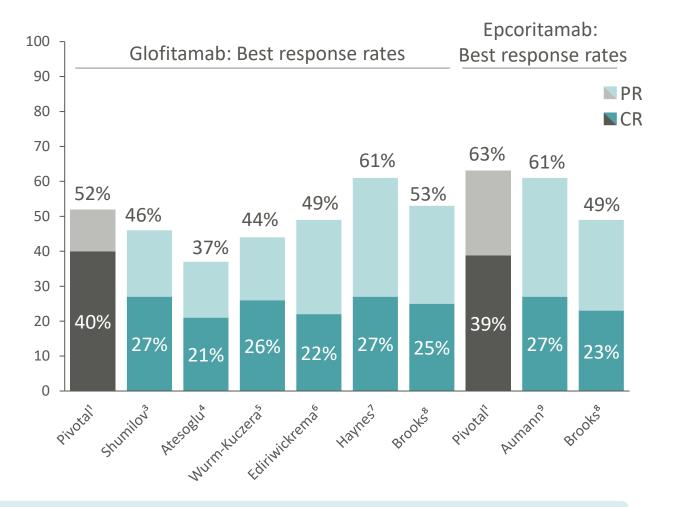




Bispecific antibodies: Pivotal data and RWE¹⁻⁹



	Pivotal studies ^{1,2}	RWE ^{3–9}
Age range, years	20–90	19–94
ECOG PS ≥2, %	0–3	9–40
Range of prior LoT, n	2–≥4	1–14
Refractory to last therapy, %	83–86	54-84
Prior CAR-T, %	33–39	60–71
mPFS, months	4.4–4.9	3.0-10.8
mOS, months	11.5–Not reached	5.7–Not reached



Epcoritamab and glofitamab are increasingly explored in the real world, where responses seem lower than in pivotal trials8

CAR-T, chimeric antigen receptor T-cell therapy; CR, complete response; ECOG PS, Eastern Cooperative Oncology Group performance status; LoT, line of therapy; mOS, median overall survival; mPFS, median progression-free survival; PR, partial response; RWE, real-world evidence.

^{1.} Dickinson et al. N Engl J Med 2022 2. Thieblemont et al. J Clin Oncol 2022 3. Shumilov et al. Blood Adv 2024 4. Atesoglu et al. Hematol Oncol 2023 5. Wurm-Kuczera et al. EHA 2024; Abstract #P1166 6. Ediriwickrema et al. EHA 2024; Abstract #P2094 7. Haynes et al. Blood 2024 8. Brooks et al. Blood 2024 9. Aumann et al. Blood 2024.

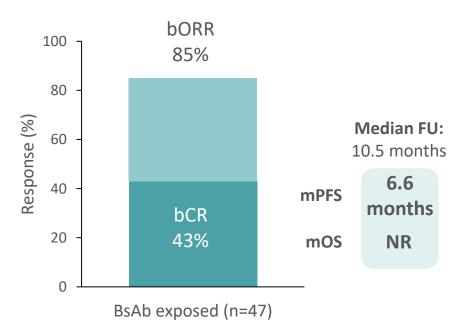
Use of bispecific antibodies before CAR-T¹



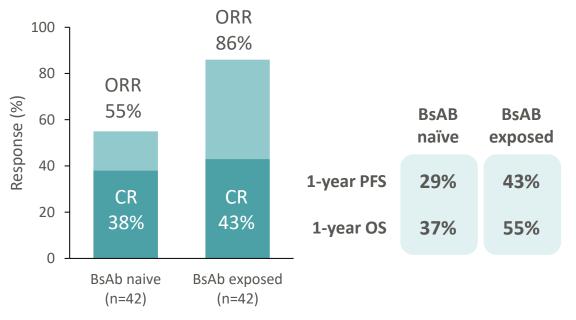


CD19-directed CAR T-cell therapy remains effective in R/R LBCL patients after prior exposure to bispecific antibodies

Best overall response to CD19-targeted CAR-T*† with prior BsAb‡ treatment



Best overall response to CD19-targeted CAR-T[†] in patients with prior BsAb[‡] treatment vs PSM-matched BsAb-naïve control patients[§]



^{*}Between 2018 and January 2023; patients exposed to CD19/CD3 BsAbs were excluded. †2 (47%) patients received axicabtagene ciloleucel (axi-cel), 20 (42%) tisagenlecleucel (tisa-cel) and 5 (11%) lisocabtagene maraleucel (liso-cel). ‡In 26 (55%) patients, BsAb therapy was the last regimen before CAR T-cells. §The 5 patients who received liso-cel were not included in this analysis due to the lack of an available control partner.

Axi-cel, axicabtagene ciloleucel; bCR, best complete response; BsAb, bispecific antibody; CAR T, chimeric antigen receptor T-cell; CR, complete response; FU, follow-up; LBCL, large B-cell lymphoma; liso-cel, lisocabtagene maraleucel; mOS, median overall survival; mPFS, median progression-free survival; ORR, overall response rate; PSM, propensity score matching; R/R, relapsed/refractory; tisa-cel, tisagenlecleucel.

1. Crochet et al. Blood 2024.

Use of bispecific antibodies after CAR-T

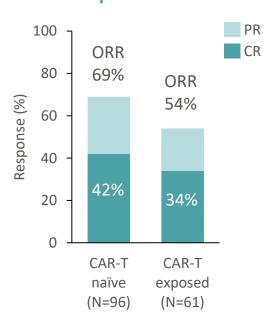




Bispecifics demonstrated clinical activity in patients who had received prior CAR-T¹⁻⁴

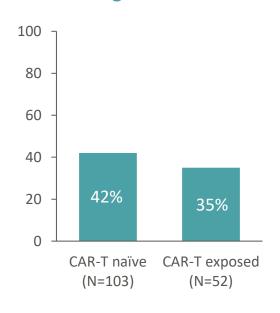
61 (38.9%) patients from EPCORE NHL-1 received prior CAR-T¹,*

Best response to epcoritamab



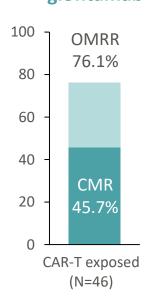
52 (33%) patients from NCT03075696 received prior CAR-T^{2,†}

Complete response to glofitamab



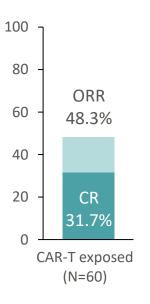
46 patients from NCT04703686 received prior CAR-T³

Metabolic response to glofitamab



60 patients from ELM-1 received prior CAR-T^{4,‡}

Best response to odronextamab



^{*46} of these patients (75.4%) had progressive disease within 6 months of CAR-T. †46 of these patients (89%) had disease that was refractory to CAR-T. ‡50 of these patients (71.7%) had disease that was refractory to CAR-T in any line. CAR-T, chimeric antigen receptor T-cell therapy; CMR, complete metabolic response; CR, complete response; OMRR, overall metabolic response rate; ORR, overall response rate; PR, partial response.

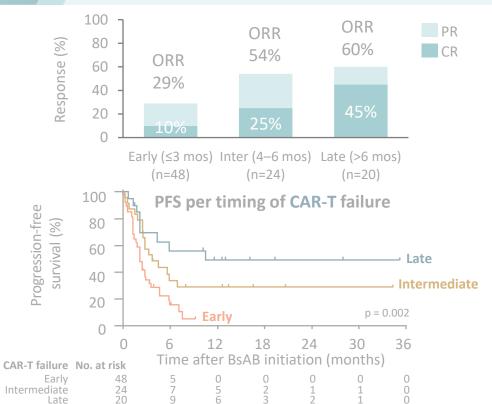
1. Thieblemont et al. *J Clin Oncol* 2023 2. Dickinson et al. *N Engl J Med* 2022 3. Cartron et al. *Nat Cancer* 2025 4. Topp et al. *Blood* 2025.

Initial data on T-cell engaging immunotherapies suggest inferior outcomes in early CAR-T failure^{1,2}



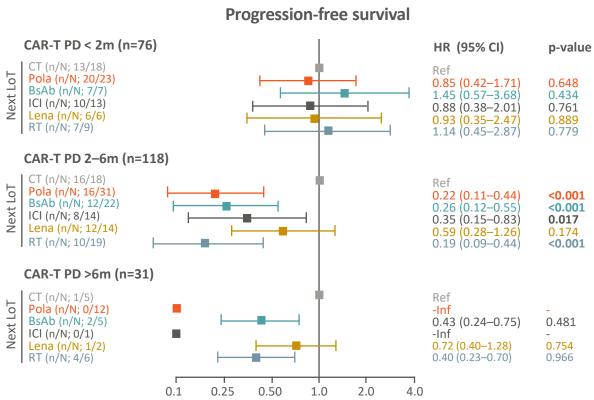


Response to glofitamab and epcoritamab* may be impaired in early post-CAR-T failure^{1,2}





BsAbs can achieve prolonged survival after CAR-T failure²



^{*92%} received glofitamab, 6% received epcoritamab, 1% received mosunetuzumab. †Significant difference. BsAb, bispecific antibody; CAR-T, chimeric antigen receptor T-cell therapy; CR, complete response; CT, chemotherapy; DLBCL, diffuse large B-cell lymphoma; EFS, event-free survival; ICI, immune checkpoint inhibitor; Lena, lenalidomide; LoT, line of therapy; mos, months; mOS, median overall survival; mPFS, median progression-free survival; ORR, overall response rate; PD, progressive disease; PFS, progression-free survival; Pola, polatuzumab vedotin; PR, partial response; RT, radiotherapy; SD, stable disease.

1. Shumilov et al. *Blood Adv* 2025 2. Iacoboni et al. *Hemasphere* 2024 (suppl.).

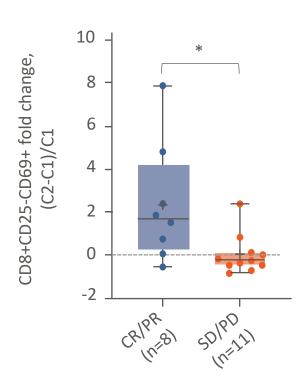
T-cell exhaustion and low immune recovery may explain SODI lower outcomes with bispecific antibodies after CAR-T failure

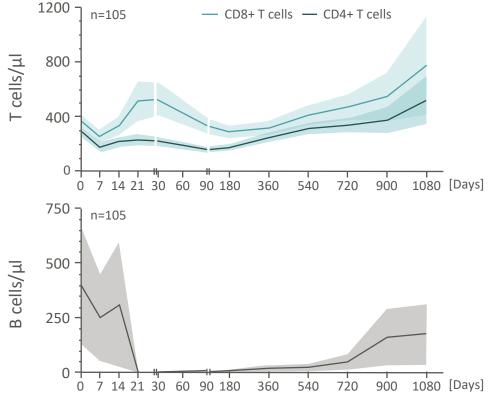


T-cell exhaustion may play a role^{1,*}



Lack of immune recovery after CAR T-cell therapy may predict worse survival outcomes²





^{*}Larger fold increase observed in activated CD8+ T cells for responding vs nonresponding patients p=0.02. CAR-T, chimeric antigen receptor T-cell therapy; CR, complete response; PD, progressive disease; PR, partial response; SD, stable disease.

1. Chong et al. *Blood Adv* 2025 2. Stock et al. *Hemasphere* 2025.

CD20 loss and impact on outcomes: Emerging data^{1–4}





CD20 loss may impact on outcomes after bispecific antibodies¹

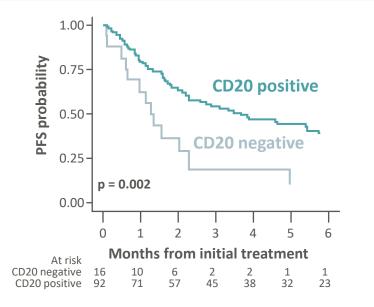


CD20 loss seems common in patients failing glofitamab^{2,3}

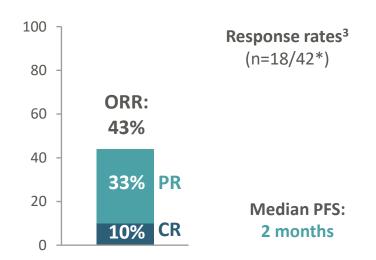


CD20 loss observed in patients failing mosunetuzumab⁴

17/19 (89%) pts with paired samples lost CD20



High rates of CD20 loss (59%) at relapse post-glofitamab*



On-treatment[†] biopsies (n=30)

97% maintained CD20 levels while on treatment

Paired biopsies at progression (n=32)



34% showed CD20 loss PFS reduction was observed

Poor outcomes and loss of CD20 expression after bispecifics failure represents an unmet medical need in DLBCL³

^{*}Among 22 patients with available biopsies, n=10 converted from CD20⁺ to CD20⁻; n=2 remained persistently CD20⁻; n=10 had unknown pretreatment status. †Cycle 1, Day 15 to Cycle 3, Day 1. CR, complete response; DLBCL, diffuse large B-cell lymphoma; ORR, overall response rate; OS, overall survival; PFS, progression-free survival; PR, partial response; TTP, time to progression; pts, patients.

1. Brooks et al. ASH 2024; Oral presentation #111 2. Grigg et al. Br J Haematol 2024 3. Carlo-Stella Br J Haematol 2024 4. Schuster et al. Blood 2024.

Summary





We have an increasing amount of data and experience on novel therapies, however, a clear algorithm remains elusive



The factors impacting treatment sequencing are starting to be better understood, but the picture is still to be completed:

- The sequential use of CD19-targeted therapies seems not to impact efficacy
- The incidence and impact of CD20 loss is of emerging importance
 - CAR-T failures are particularly challenging with all therapies, factors to guide clinical choices are under exploration



As research moves forward, we need to refine our ability to tailor our decisions for our patients and determine the optimal next choice

100

Open questions remain





How will CD19 expression levels impact

efficacy in the post CAR-T space?

Clinical decision-making in practice

Professor Marek Trněný

Charles University, Prague, Czech Republic





Male, born 1951

Diagnosis

- April 2023
 - Summary: DLBCL (WHO 2022)¹, HGBCL (ICC 2022)²
 - Ann Arbor stage IVB, LDH>ULN, ECOG PS 1, age 72 years, paravertebral masses
 - Rearrangements: MYC and BCL6
 - IPI 4 High risk

Relevant medical history

Comorbidities: Hypertension, DM on treatment

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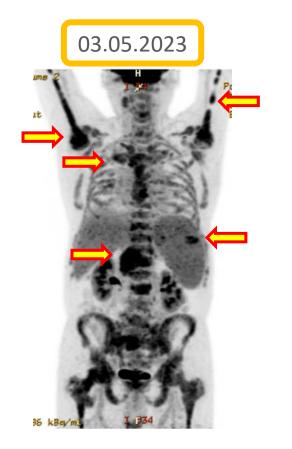
First-line therapy

9 SODI

R-CHOP

- 6 cycles
- April–August 2023

- Interim PET-CT → PR
- EOT PET-CT (September 2023) → CMR





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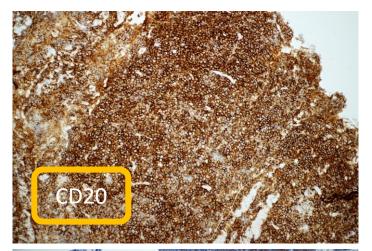
First relapse

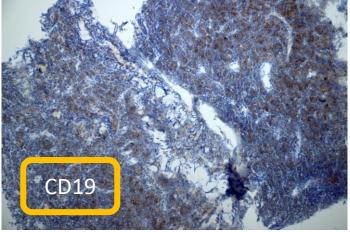


March 2024

- B symptoms (weight loss)
- Ann Arbor stage IVB
- ECOG PS 1
- 73 years old
- Re-biopsy:
 - HGBCL NOS or HGBCL "double hit" (ICC 2022¹)
 - Ki-67: 100%







CAR-T is the new 2L standard of care for patients who relapse within 12 months after first-line therapy^{1–3}

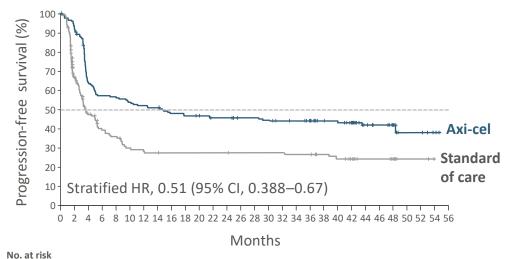




Axi-cel vs standard of care in 2L1



Liso-cel vs standard of care in 2L^{2,3}



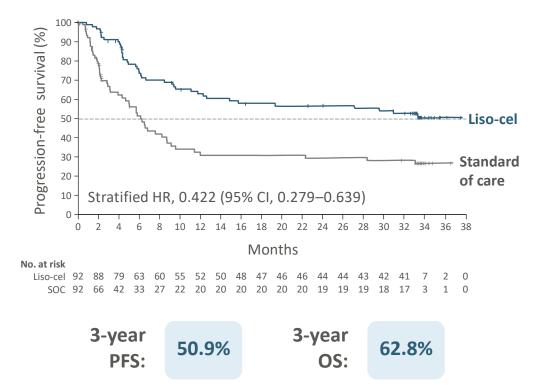
Axi-cel 18016611210099 94 91 89 83 81 79 77 77 73 73 71 68 67 63 54 52 45 32 29 22 7 7 3 0 SOC 179 94 61 47 43 35 33 32 31 31 31 31 30 30 30 30 29 29 25 23 18 10 10 8 4 4 0

4-year PFS:

42%

4-year OS:

55%

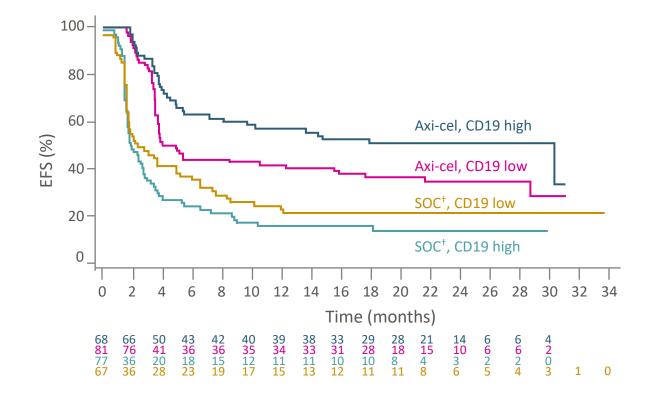


Median follow-up of 47.2 months (range, 39.8–60.0) for axi-cel¹, and 33.9 months (range, 0.9–53.0) for liso-cel². CAR T-cell therapies were first approved in R/R DLBCL as a 3L of therapy.

2L, second line; 3L, third line; axi-cel, axicabtagene ciloleucel; CAR T, chimeric antigen receptor T-cell therapy; DLBCL, diffuse large B-cell lymphoma; liso-cel, lisocabtagene maraleucel; OS, overall survival; PFS, progression-free survival; R/R, relapsed or refractory.

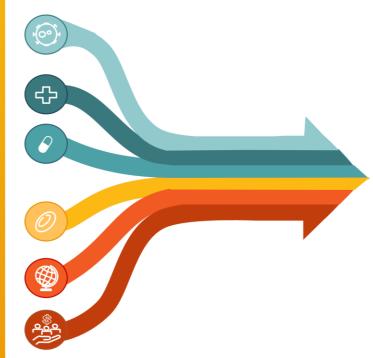
CD19 expression and CAR-T therapy: What do we know? • SODI

Currently available data support a correlation between CD19 expression levels and CAR T-cell therapy outcomes¹



^{*}SOC defined as 2–3 cycles of protocol-defined, investigator-selected, platinum-based chemotherapy with intention to subsequently undergo high-dose chemotherapy with autologous stem cell transplantation for chemosensitive patients. Axi-cel, axicabtagene ciloleucel; CAR-T, chimeric antigen receptor T-cell; EFS, event-free survival; SOC, standard of care.

1. Locke et al. Nat Med 2024.





Which treatment would you choose for secondline therapy? (Select one)

- A. CAR T-cell therapy?
- B. Salvage + ASCT?
- C. Tafa-Len?
- D. Pola-BR?
- E. Clinical Trial?



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Second-line therapy: CAR-T



R-ICE bridge

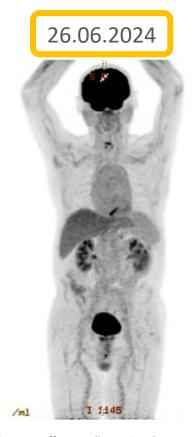
- Apheresis, April 2024
 - WBC 3.6×10⁹/L
 - Absolute lymphocyte count 0.7×10⁹/L

Axi-cel

- May 2024
- CRS Gr1, ICANS Gr1, tocilizumab
 - CAR T-cell peak expansion:
 CD4+CAR T-cell: 23.4%, CD8+
 CAR T-cell 25.1%

• PET-CT d+30 \rightarrow CMR





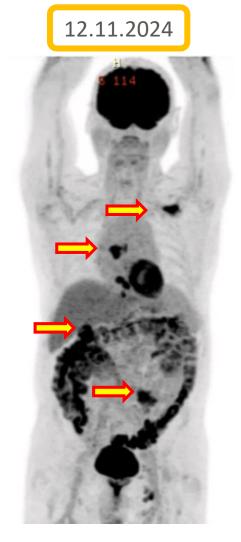
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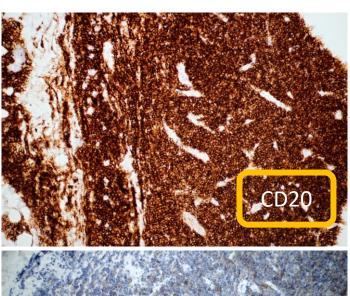
Second relapse

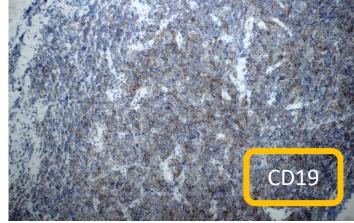


November 2024

- Ann Arbor stage IVA (subcutaneous, lymph nodes, paravertebral)
- ECOG PS 1
- 73.5 years old
- Re-biopsy:
 - CD20+
 - CD19+

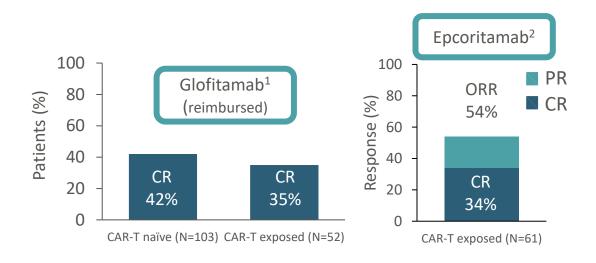


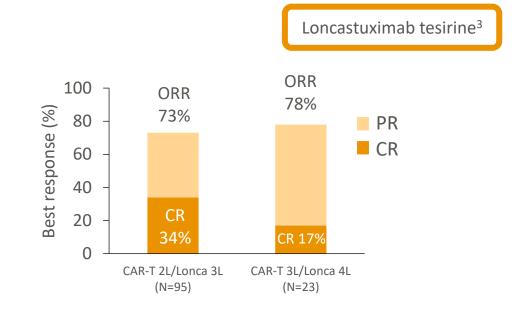


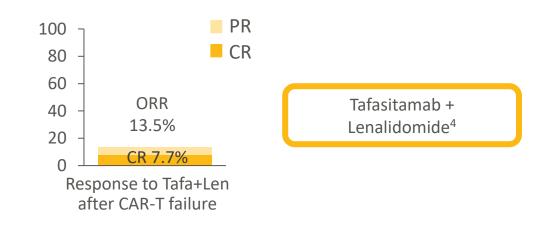


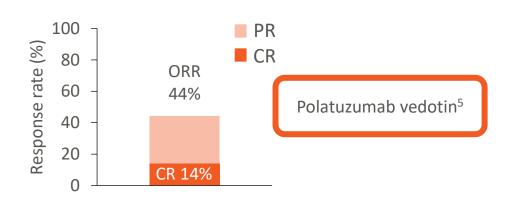
Third-line therapy?















Which treatment would you choose for third-line therapy? (Select one)

- A. Salvage + ASCT?
- B. Glofitamab? Epcoritamab?
- C. Tafa-Len?
- D. Pola-BR?
- E. Loncastuximab tesirine?
- F. Immunochemotherapy?



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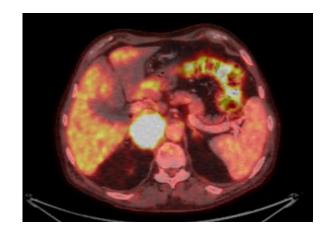
Third line therapy

Sobi

Glofitamab

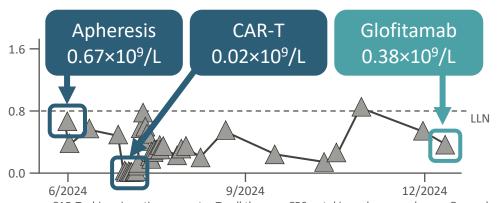
- 3 cycles
- November 2024–January 2025
- CRS Gr1, ICANS Gr0

PET-CT January 2025 → PD

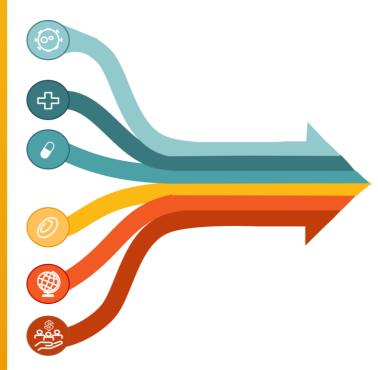




Absolute lymphocyte count



CAR-T, chimeric antigen receptor T-cell therapy; CRS, cytokine release syndrome; Gr, grade; ICANS, immune effector cell-associated neurotoxicity syndrome; LLN, lower limit of normal; PD, progressive disease; PET-CT, positron emission tomography—computed tomography.





Which treatment would you choose for fourth line therapy? (Select one)

- A. Tafa-Len?
- B. Pola-BR?
- C. Loncastuximab tesirine?
- D. Immunochemotherapy?



Fourth line therapy



Loncastuximab tesirine

- 5 cycles (February–June 2025)
 - Skin toxicity Gr1, cytopenia, pneumonia Gr2 after 3rd cycle, febrile neutropenia after 5th cycle (hospitalised 4 days)

CAR-T

 $0.02 \times 10^9 / L$

9/2024

Treatment ongoing

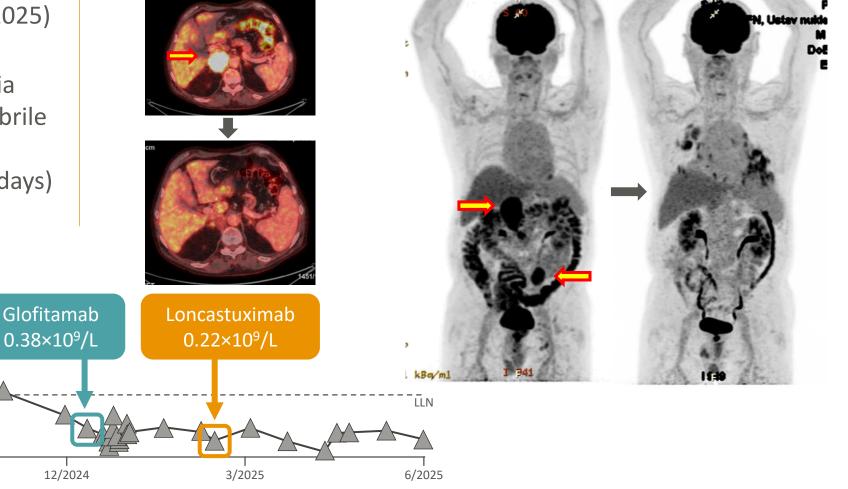
Absolute lymphocyte count

Apheresis

0.67×10⁹/L

6/2024

PET-CT April 2025 → CMR

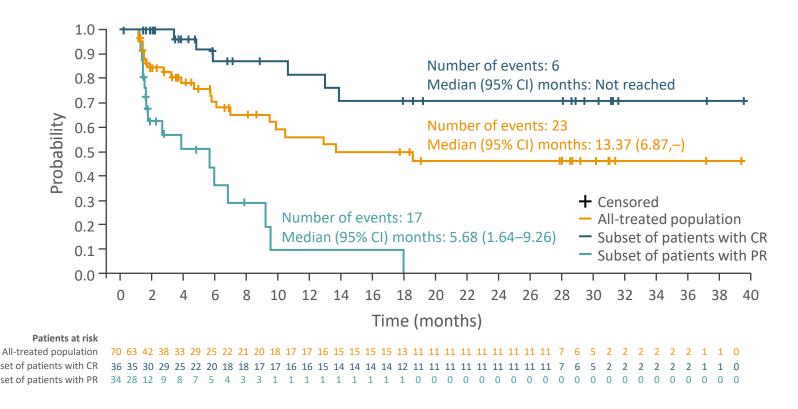


CAR-T, chimeric antigen receptor T-cell therapy; CMR, complete metabolic response; Gr, grade; LLN, lower limit of normal; PET-CT, positron emission tomography—computed tomography.

12/2024

Among heavily pretreated patients with R/R DLBCL in the pivotal LOTIS-2 study, Lonca demonstrated durable responses¹





Summary





Despite novel therapies being available in R/R DLBCL, there remains an **unmet medical need** for patients with high-risk disease or early CAR-T failure



RWE is becoming increasingly relevant for guiding treatment decisions



Not all therapeutic options are widely available across geographies



In the absence of head-to-head studies, decisions need to be **tailored** to patient's and disease's characteristics



Treatment sequencing is expected to evolve. How we make the best use of our available options is a continuous learning¹

Treatment sequencing on the horizon: What is next?

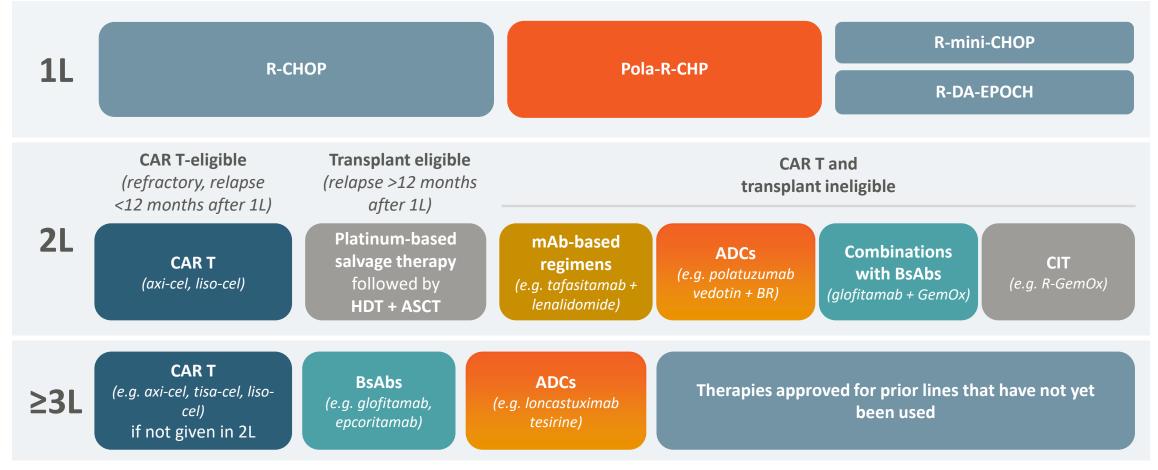
Professor Andrew Davies

University of Southampton, Southampton, United Kingdom

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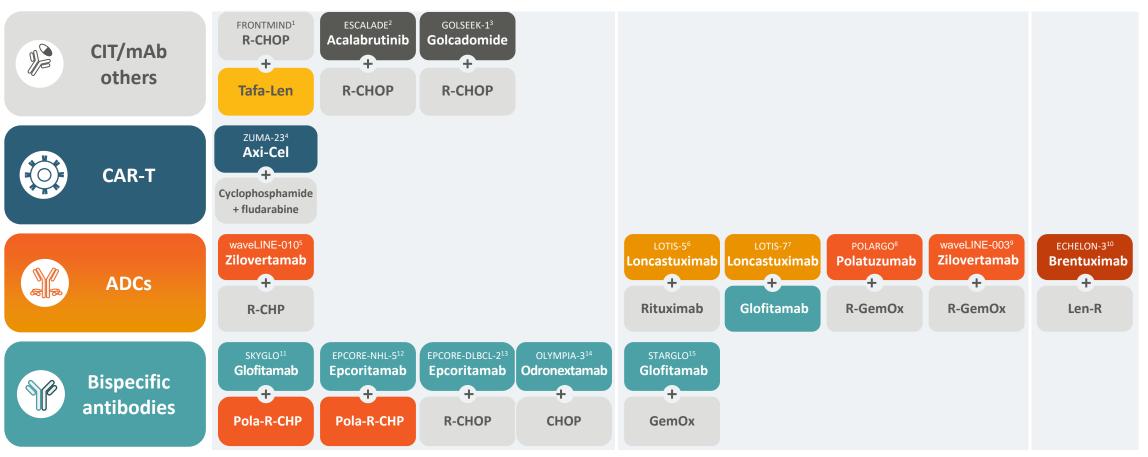
Numerous treatment options are now available for DLBCL in each line^{1–9}





ADC, antibody-drug conjugate; ASCT, autologous stem cell transplantation; axi-cel, axicabtagene ciloleucel; BR, bendamustine and rituximab; BsAb, bispecific antibody; CAR T, chimeric antigen receptor T-cell therapy; CIT, chemo-immunotherapy; DLBCL, diffuse large B-cell lymphoma; HDT, high-dose therapy; L, line; liso-cel, lisocabtagene maraleucel; mAb, monoclonal antibody; pola, polatuzumab vedotin; R-CH(O)P, rituximab, cyclophosphamide, doxorubicin, (vincristine), and prednisone; R-DA-EPOCH, rituximab, dose-adjusted etoposide, prednisone, vincristine, cyclophosphamide, and doxorubicin; R-GemOx, rituximab, gemcitabine, and oxaliplatin; tisa-cel, tisagenlecleucel. 1. Sehn & Salles N Engl J Med 2021 2. Frontzek et al. Ther Adv Hematol 2022 3. Peyrade et al. Blood 2010 4. Polivy SmPC 2023 5. Columvi SmPC 2023 6. Tepkinly SmPC 2023 7. Zynlonta SmPC 2023 8. Bartlett et al. J Clin Oncol 2019 9. Roche Press release 2025.

And new combination therapies are under evaluation in DLBCL, potentially changing our future approach even more 1-15 3L



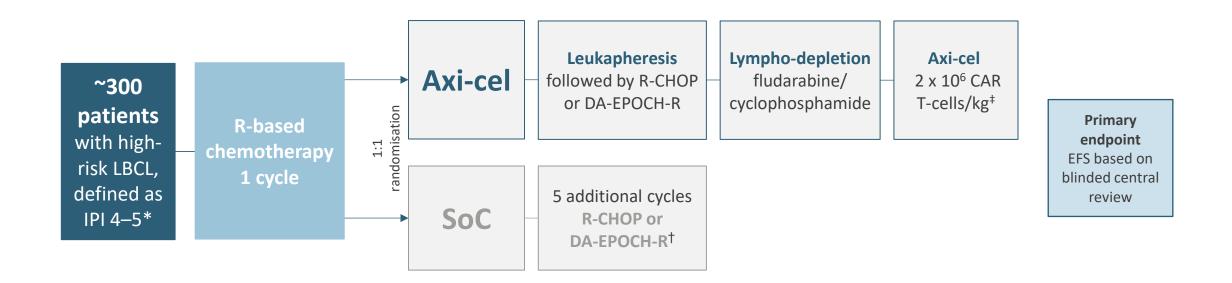
Ongoing company-sponsored, registration studies. ADCs, antibody-drug conjugates; axi-cel, axicabtagene ciloleucel; BR, bendamustine and rituximab; CAR-T, chimeric antigen receptor T-cell therapy; DLBCL, diffuse large B-cell lymphoma; Len, lenalidomide; liso-cel, lisocabtagenemaraleucel; pola, polatuxumab vedotin; R, rituximab; (R-)CH(O)P, (rituximab,) cyclophosphamide, doxorubicin, (vincristine,) and prednisone; (R-)GemOx, (rituximab,) gemcitabine, and oxaliplatin; tafa, tafasitamab; tisa-cel, tisagenlecleucel. 1. ClinicalTrials.gov NCT04824092 2. ClinicalTrials.gov NCT04529772 3. ClinicalTrials.gov NCT06356129 4. ClinicalTrials.gov NCT05605899 5. ClinicalTrials.gov NCT06717347 6. ClinicalTrials.gov NCT04384484 7. ClinicalTrials.gov NCT04970901 8. ClinicalTrials.gov NCT04182204 9. ClinicalTrials.gov NCT05139017 10. ClinicalTrials.gov NCT04404283 11. ClinicalTrials.gov NCT06047080 12. ClinicalTrials.gov NCT05283720 13. ClinicalTrials.gov NCT05578976 14. ClinicalTrials.gov NCT06091865 15. ClinicalTrials.gov NCT04408638.

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Will CAR-T be used in 1L?



ZUMA-23¹ (NCT05605899)



^{*}Patients with a history of HIV and/or hepatitis B or C and undetectable viral loads may enrol. Key exclusion criteria include LBCL of the central nervous system. †R-CHOP or DA-EPOCH-R, based on the investigator's choice. ‡Prophylactic corticosteroids may be administered to reduce the incidence and severity of cytokine release syndrome at the investigator's discretion.

¹L, first-line; axi-cel, axicabtagene ciloleucel; CAR-T, chimeric antigen receptor T-cell therapy; CHOP, cyclophosphamide, doxorubicin, vincristine, and prednisone; DA, dose-adjusted; EFS, event-free survival; EPOCH, etoposide, prednisone, vincristine, cyclophosphamide and doxorubicin; HIV, human immunodeficiency virus; IPI, International Prognostic Index; LBCL, large B-cell lymphoma; R, rituximab; SOC, standard of care.

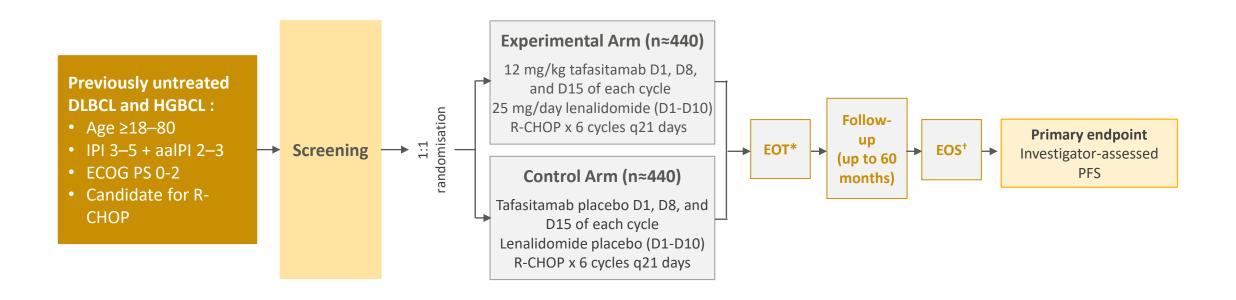
1. Westin et al. *HemaSphere* 2023.

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Will tafasitamab be used in 1L?



frontMIND² (NCT04824092)

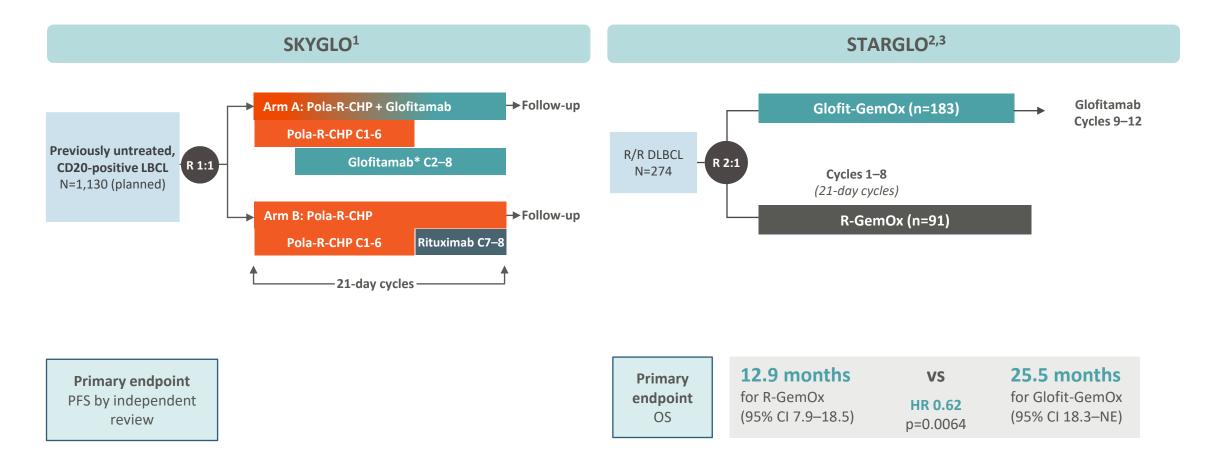


^{*}EOT is defined as D21 of the last treatment cycle the patient started. †EOS is expected to occur approximately 5 years after the first patient is enrolled, to allow all patients a minimum of 3 years follow-up post-treatment. C, cycle; D, day; DLBCL, diffuse large B-cell lymphoma; ECOG PS, Eastern Cooperative Oncology Group performance status; EOT, end of treatment; EOS, end of study; HGBL, high-grade B-cell lymphoma; R-CHOP, rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone; q, every.

P-42410

How will glofitamab play in earlier lines of treatment?



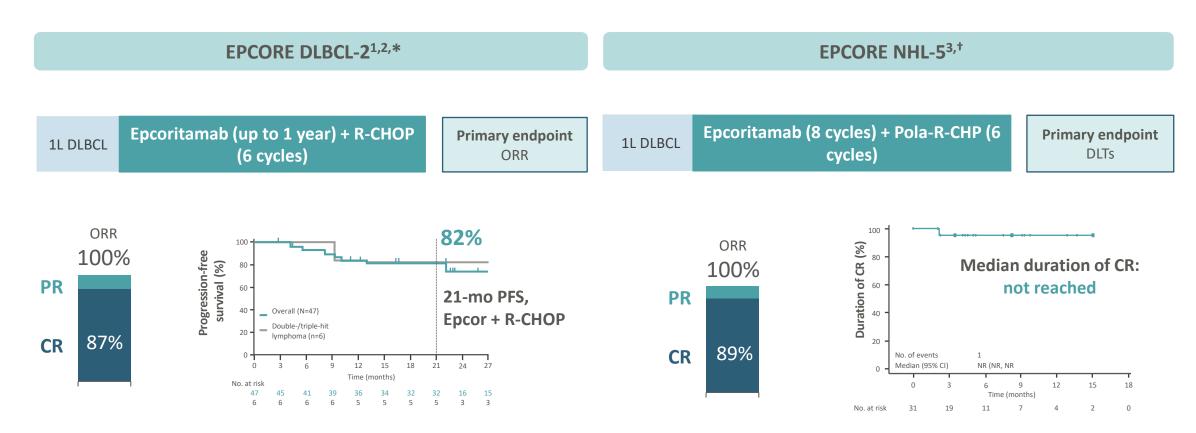


^{*}Administered with step-up dosing. ASCT, autologous stem cell transplantation; C, cycle; CR, complete response; DLBCL, diffuse large B-cell lymphoma; ECOG PS, Eastern Cooperative Oncology Group performance status; EFS, event-free survival; HR, hazard ratio; LBCL, large B-cell lymphoma; ORR, overall response rate; OS, overall survival; PFS, progression-free survival; pola, polatuzumab vedotin; PR, partial response; R-CHP, rituximab, cyclophosphamide, doxorubicin, prednisone.

^{1.} Advani et al. ASH 2024; Poster 1718.1 2. Abramson Lancet 2024 3. ClinicalTrials.gov NCT04408638.

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Phase 1/2 studies are also investigating epcoritamab in earlier lines and in combination

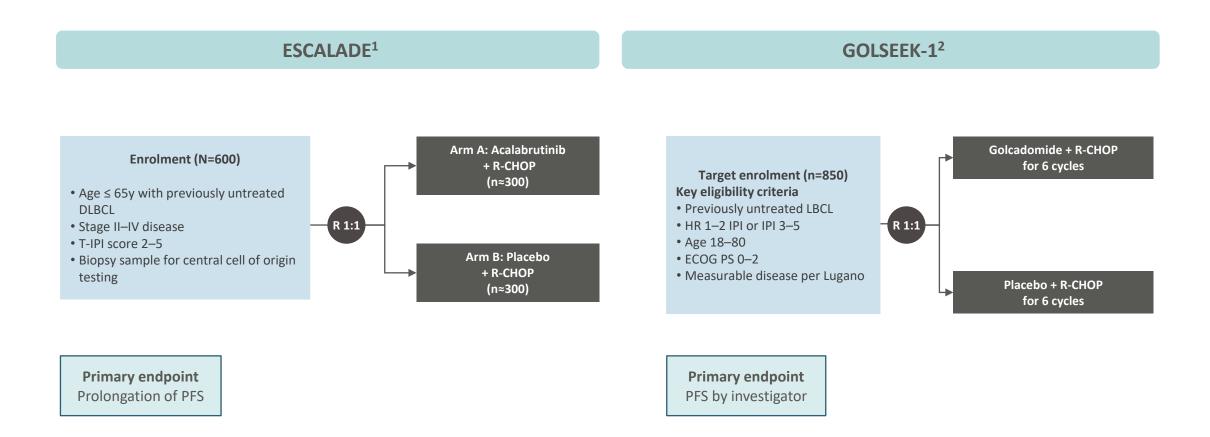


^{*}NCT04663347. Data as of 15 May 2024. † Data cutoff: 29 February 2024.

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Acalabrutinib and golcadomide in 1L DLBCL

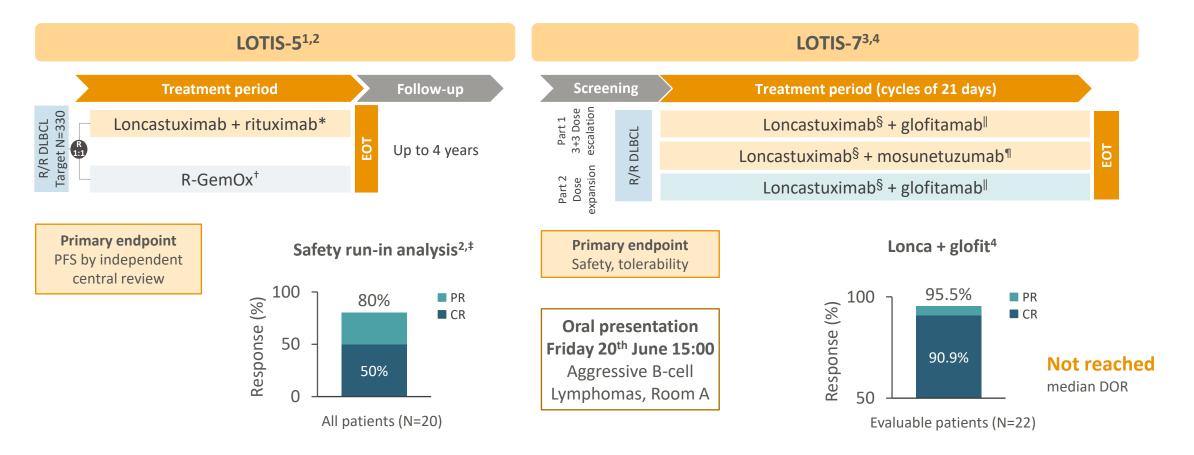




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Loncastuximab in earlier lines and in combination



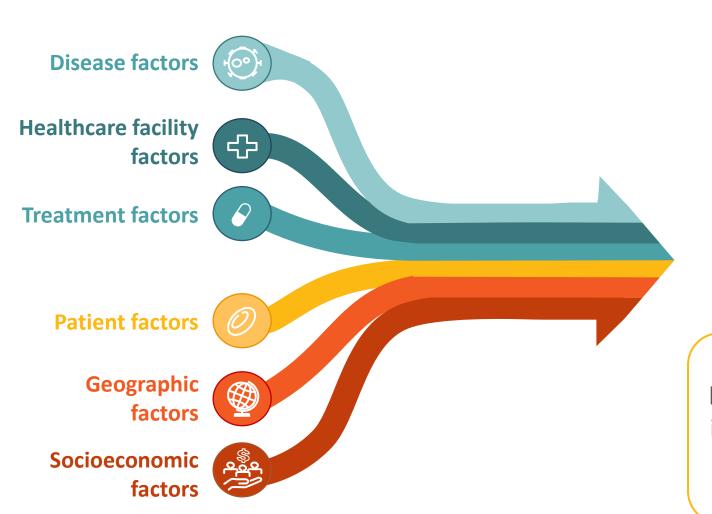


^{*}Loncastuximab tesirine 150 µg/kg + rituximab 375 mg/m² Q3W for 2 cycles, followed by Loncastuximab tesirine 75 µg/kg + rituximab 375 mg/m² Q3W for up to 6 additional cycles. †Rituximab 375 mg/m² + gemcitabine 1,000 mg/m² + oxaliplatin 100 mg/m² Q2W for up to 8 cycles. ‡Data cut-off: 10 April 2023. §Loncastuximab tesirine 150 µg Q3W for Cycles 1 and 2, followed by 75 µg for subsequent cycles. ||Glofitamab 2.5 mg on Cycle 1 Day 8, 10 mg on Cycle 1 Day 15, and 10 mg or 30 mg on Day 1 of Cycles 2–12. ¶ Mosunetuzumab 5 mg on Cycle 1 Day 1, 15 mg or 45 mg on Cycle 1 Day 8, and 45 mg for Cycle 1 Day 15 and Day 1 of Cycles 2–8. CR, complete response; DLBCL, diffuse large B-cell lymphoma; B-NHL, B-cell non-Hodgkin lymphoma; DOR, duration of response; EOT, end of treatment; GemOx, gemcitabine and oxaliplatin; glofit, glofitamab; Lonca, loncastuximab tesirine; PFS, progression-free survival; PR, partial response; R/R, relapsed/refractory.

^{1.} Clinicaltrials.gov NCT04384484 2. Carlo-Stella et al. EHA 2025 3. Clinicaltrials.gov NCT04970901 4. Alderuccio et al. EHA 2025; Abstract #PS1911.

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Multiple factors have a role in defining the next treatment¹ (9) SOOI





With therapies moving to earlier lines, and new classes of drugs under investigation, how will we choose the best next line of therapy for our patients?

Summary





The DLBCL landscape is expected to extensively change in the next years



Many clinical studies are ongoing, and some have shown very promising results



The future approach is led by combinations



How the earlier use of novel treatments will affect the subsequent strategies is to be understood



More choice means more responsibility for deciding the best way to cure our patients

Panel discussion and Q&A

All faculty

Chair: Professor Andrew Davies

IP-42405

Get ready to interact: Q&A



In-person attendees:



Scan the QR code at the bottom right of the screen using your phone or tablet device



Select what you want to do



Q&A:

'Ask a question' button

...or use the microphones available in the room!

Virtual attendees:

Use the 'Q&A' button to the right of your live stream video



Thank you!

