





La terapia cellulare CAR-T
è più efficace del trapianto autologo
nella terapia di seconda linea dei
linfomi B a grandi cellule ricaduti
precocemente?

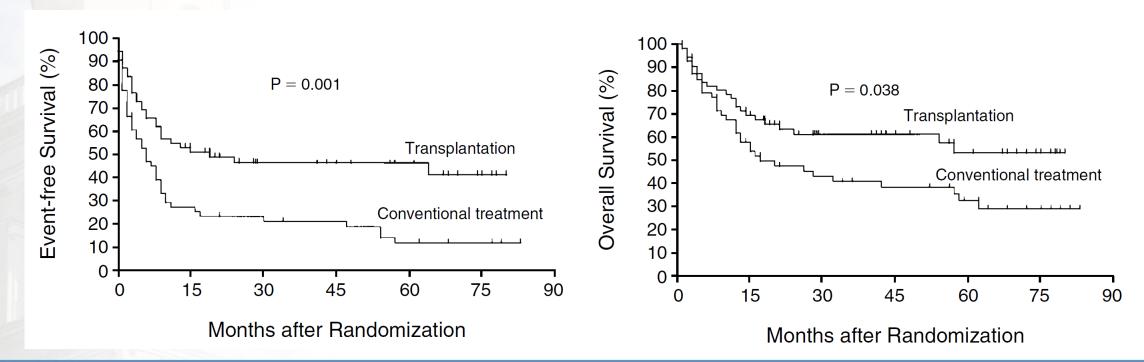
HOT QUESTIONS
IN TRASPLANTATION
AND CELLULAR
THERAPIES

Udine 13-14 novembre 2023

Aula Polifunzionale - Ospedale di Udine

# AUTOLOGOUS BONE MARROW TRANSPLANTATION AS COMPARED WITH SALVAGE CHEMOTHERAPY IN RELAPSES OF CHEMOTHERAPY-SENSITIVE NON-HODGKIN'S LYMPHOMA

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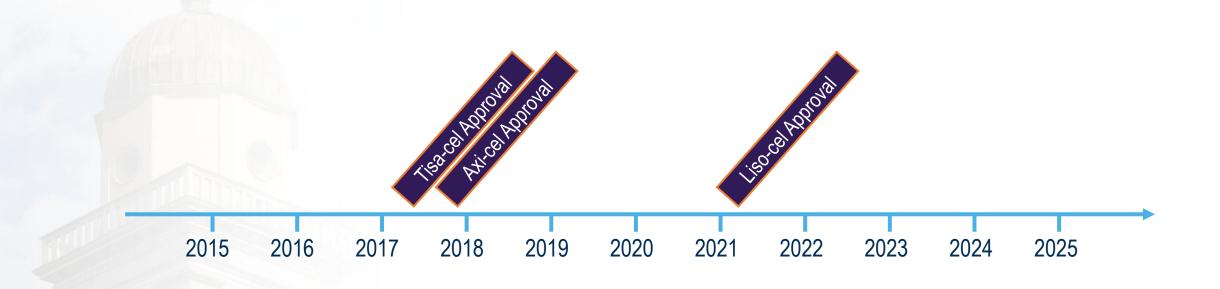


# Diffuse large B-cell lymphoma (DLBCL): ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up<sup>†</sup>

First relapse/progress	
Eligible for transplant	Not eligible for transplant
Platinum-based chemotherapy regimens (i.e. R-DHAP, R-ICE, R-GDP) as salvage treatment  For chemosensitive patients: R-HDCT with ASCT as remission consolidation  Consider allogeneic transplantation in patients relapsed after R-HDCT with ASCT or in patients with poor-risk factors at relapse	Platinum- and/or gemcitabine-based regimens Clinical trials with novel drugs
>2 relapse/progress	
Eligible for transplant	Not eligible for transplant
Allogeneic transplantation Clinical trials with novel drugs	Clinical trials with novel drugs Palliative care

Annals of Oncology 26 (Supplement 5) 2015

## **Expansion of the Field of Cellular Immunotherapy for DLBCL**



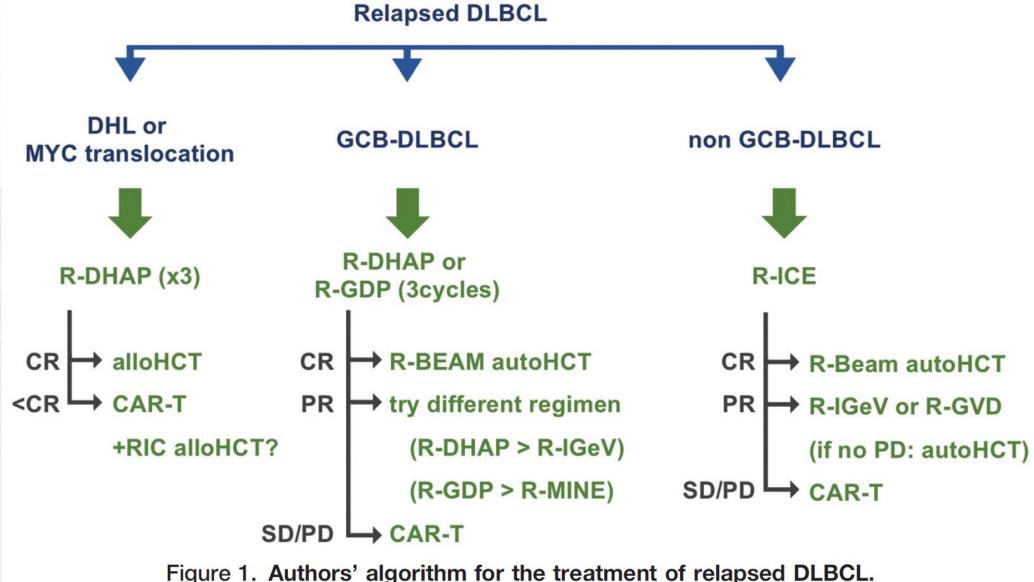


Figure 1. Authors' algorithm for the treatment of relapsed DLBCL.

Lekakis LJ & Moskowitz CH. HemaSphere 2019

# Anti-CD19 CAR T Cells for Aggressive 2L LBCL

	APPROVED PRODUCTS	
	Axicabtagene Ciloleucel <sup>1</sup> (KTE-C19)	Lisocabtagene Maraleucel <sup>2</sup> (JCAR017)
Pivotal Trial	ZUMA-7 NCT03391466	TRANSFORM NCT03575351
Phase	Phase 3	Phase 3
Dose Level	2 × 10 <sup>6</sup> cells	1×10 <sup>8</sup> cells
Conditioning Chemotherapy	FLU 30 mg/m <sup>2</sup> and CY 500 mg/m <sup>2</sup> × 3 days	FLU 30 mg/m $^2$ and CY 300 mg/m $^2$ × 3 days
Evaluable Patients (N)	DLBCL (N = 180)	DLBCL (N = 92)
Response Rates	ORR = 83% CR = 65%	ORR = 86% CR = 66%

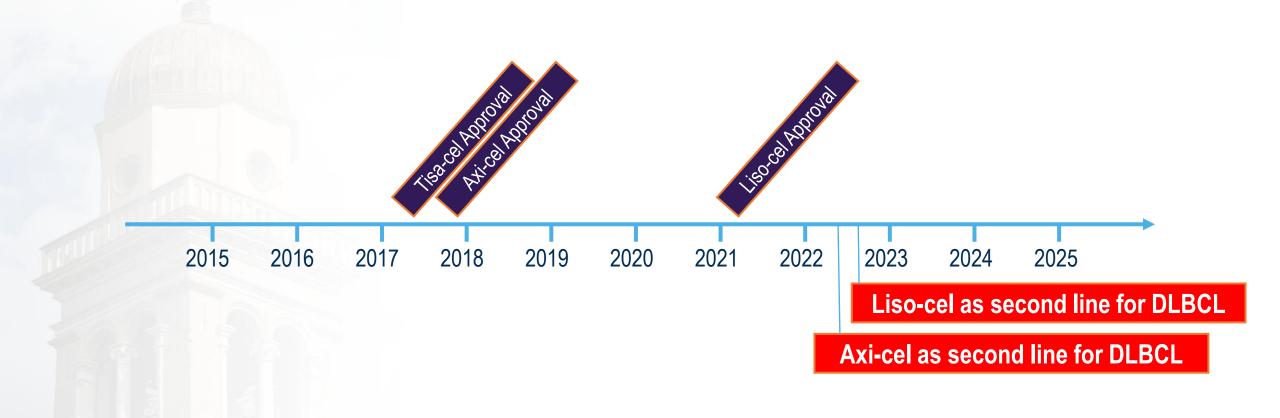
NOT APPROVED
Tisagenlecleucel <sup>3</sup> (CTL019)
BELINDA NCT03570892
Phase 3
2.9×10 <sup>8</sup> cells
FLU 25 mg/m²+ CY 250 mg/m²×3 days <u>or</u> Bendamustine 90 mg/m²×2 days
DLBCL (N = 162)
Tisagenlecleucel was not superior to standard salvage therapy

<sup>1.</sup> YESCARTA. Package insert. Kite Pharma, Inc.; 2022.

<sup>2.</sup> Kamdar M, et al. Lancet. 2022;399:2294-308.

<sup>3.</sup> Bishop MR, et al. NEJM. 2022;386(7):629-39.

## **Expansion of the Field of Cellular Immunotherapy for DLBCL**





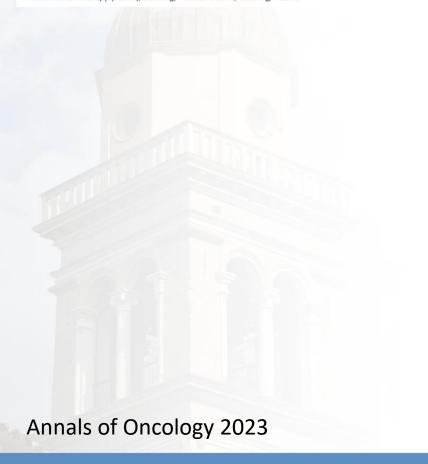


#### REVIEW

#### How I treat diffuse large B-cell lymphoma

T. Melchardt<sup>1,2,3,4</sup>, A. Egle<sup>1,2,3,4</sup> & R. Greil<sup>1,2,3,4\*</sup>

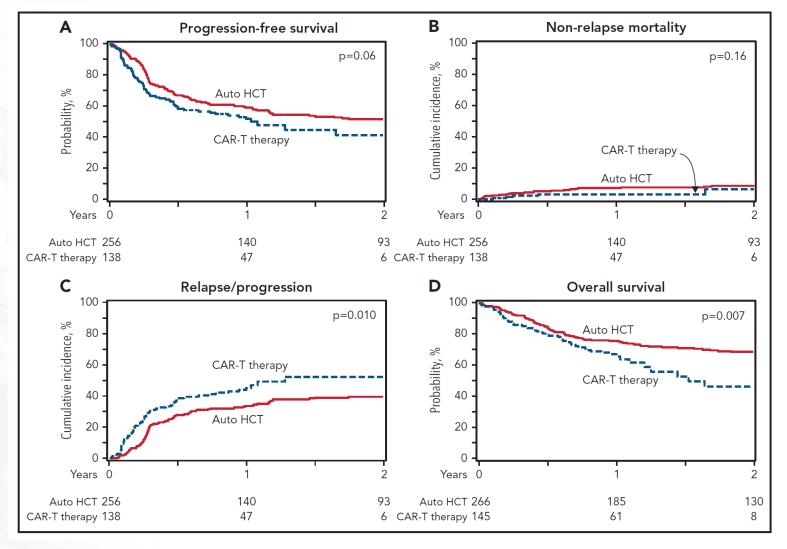
<sup>1</sup>Illrd Medical Department at the Paracelsus Medical University Salzburg, Cancer Center, Salzburg; <sup>2</sup>Salzburg Cancer Research Institute, Salzburg; <sup>3</sup>Austrian Group for Medical Tumor Therapy (AGMT), Salzburg; <sup>4</sup>Cancer Cluster, Salzburg, Austria



**Newly diagnosed** DH or TH lymphoma DLBCL Low risk Higher-risk (localized, low LDH, (advanced stage, no DHL) higher IPI, no DH or TH) Four cycles R-CHOP POLA-R-CHP with Consider R-DAwith an iPET after PET after six cycles EPOCH in higherthree cycles risk IPI patients Progression or relapse especially within a year after first line treatment Consider new CAR-T therapy in options in elderly/ feasible patients frail patients: tafasitamablenalidomide; polatuzumab, rituximab, bendamustine or bispecifics

Figure 1. My approach to DLBCL outside a clinical trial.

## **ASCT vs CAR-T for relapsed DLCBL in PR**



Shadman M et al. Blood 2022

# **CAR T Therapy: Acute Toxicities**

- Cytokine release syndrome
- Immune effector cell-associated neurotoxicity syndrome (ICANS)
- Cytopenias and their consequences (ICAHT)
- Acute infusion toxicity
- Tumor lysis
- MAS or HLH (may be life threatening if not managed by expert multidisciplinary team)
- Anaphylaxis
- Coagulopathy
- Economic issues

Lee DW, Santomasso BD, Locke FL, et al. Biol Blood Marrow Transplant. 2019;25(4):625-638.

# **Key Points**

- Patients with relapsed DLBCL after 2 or more lines of therapy, including ASCT, represent a group with poor prognosis. CAR-T cell therapy offers long-term survival for a proportion of these patients.
- In the setting of primary refractory disease or disease that relapsed within a year following first-line chemotherapy, 2 out of 3 clinical trials that compared CAR-T cell therapy to ASCT favored the first modality in terms of progression-free survival. However, a retrospective registry study favored ASCT in patients who achieved objective response to salvage chemotherapy (chemosensitive).

Which is the preferred second-line treatment option for patients with relapsed or refractory DLBCL?