

touchPANEL DISCUSSION

CAR-T in clinical practice:
Navigating the patient journey from
referral to long-term follow-up

An expert panel discussion
recorded in July 2020

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Expert panel



Prof. Mohamad Mohty (Chair)
Professor of Hematology and
Head of the Hematology and
Cellular Therapy Department,
Sorbonne University and
Saint-Antoine Hospital,
Paris, France



Dr John Kuruvilla
Associate Professor of Medicine
and Hematologist,
University of Toronto and
Princess Margaret Cancer Centre,
Toronto, Canada



Dr Robin Sanderson
Consultant Haematologist
and lead of the lymphoma
CAR-T programme,
King's College Hospital,
London, UK

Agenda

What is the real-world evidence for CAR-T therapy in patients with DLBCL and what does it mean for clinical practice?

Presentation: Mohamad Mohty

Panel discussion: John Kuruvilla and Robin Sanderson; moderated by Mohamad Mohty

Why is early referral for CAR-T therapy important and how do we select patients for referral?

Presentation: Mohamad Mohty

Panel discussion: John Kuruvilla and Robin Sanderson; moderated by Mohamad Mohty

How can referral centres and treatment centres collaborate for optimal patient care?

Presentation: Mohamad Mohty

Panel discussion: John Kuruvilla and Robin Sanderson; moderated by Mohamad Mohty

A hand in a white lab coat sleeve holds a silver pen, poised to write on a wireframe globe. The globe is centered in the frame, and the background is a blurred clinical setting. The overall color palette is a muted blue.

What is the real-world evidence for CAR-T therapy in patients with DLBCL and what does it mean for clinical practice?

CAR-T, chimeric antigen receptor T-cell; DLBCL, diffuse large B-cell lymphoma.

Using real-world data to improve decision making^{1,2}

Randomized controlled trial



- Pre-defined patient inclusion and exclusion criteria

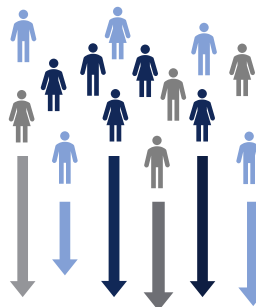


- Coordinated and standardized data collection and analysis



Test safety and efficacy of a treatment in a controlled system before routine clinical practice

Real-world data



- Generated during routine clinical practice
- Data collected from a broad range of sources



Value of real-world data:

- Complement data from randomized controlled trials
- Generate insights about how a medicine is used



Limitations of real-world data:

- Variable sources and types of data may limit the generalizability of the results
- Reproducibility requires standardized datasets, protocols and tools

Real-world data from the UK – EHA25 Virtual

High-grade lymphoma patients treated with CD19 CAR-T¹



England,
NCCP



N=183
patients



Dec 2018 –
Jan 2020

Adverse effects (Axi-cel + Tisagen)

	% (n/N)
Grade ≥3 CRS	8% (15/183)
Grade ≥3 ICANS	15% (27/183)

Treatment response (Axi-cel + Tisagen)

	% (n/N)
ORR 3 months	42% (65/156)
ORR 6 months	32% (36/114)

High-grade neurological toxicity following CD19 CAR-T²



London,
UCLH



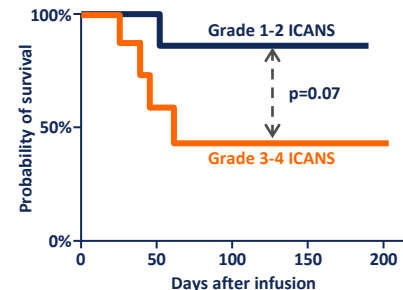
N=44
patients



Apr 2019 –
Mar 2020

Adverse effects (Axi-cel + Tisagen)

	% (n/N)
Grade ≥3 ICANS	18% (8/44)



! Patients with high-grade ICANS had a trend towards lower survival

Axi-cel, axicabtagene ciloleucel; CAR-T, chimeric antigen receptor T-cells; CRS, cytokine release syndrome; ICANS, immune effector cell-associated neurotoxicity syndrome; NCCP, National CAR-T Clinical Panel; ORR, overall response rate; Tisagen, tisagenlecleucel; UCLH, University College London Hospital.

1. Kuhn A, et al. EHA25 Virtual 2020 [Oral presentation p428–4; Abstract S243]. 2. Mackenzie S, et al. EHA25 Virtual 2020 [Poster EP1510].

Real-world data from France – EHA25 Virtual

CD19 CAR-T in patients with relapsed/refractory large B-cell lymphoma¹



France,
Lyon Sud Hospital



N=61
patients



Jan 2017 –
Nov 2019

Adverse effects (Axi-cel + Tisagen)

	% (n/N)
Grade ≥ 3 CRS	8% (5/61)
Grade ≥ 3 ICANS	10% (6/61)

- ! • CRS and neurotoxicity occurred less frequently than in clinical trials^{2,3}

Treatment response (Axi-cel + Tisagen)

	% (n/N)
ORR 1 month	63% (37/59)
ORR 3 months	45% (25/56)

- ! • ORR 1 month after infusion confirms early efficacy of CAR-T
- Rapid relapses seem to occur at a higher frequency than previously reported^{2,3}

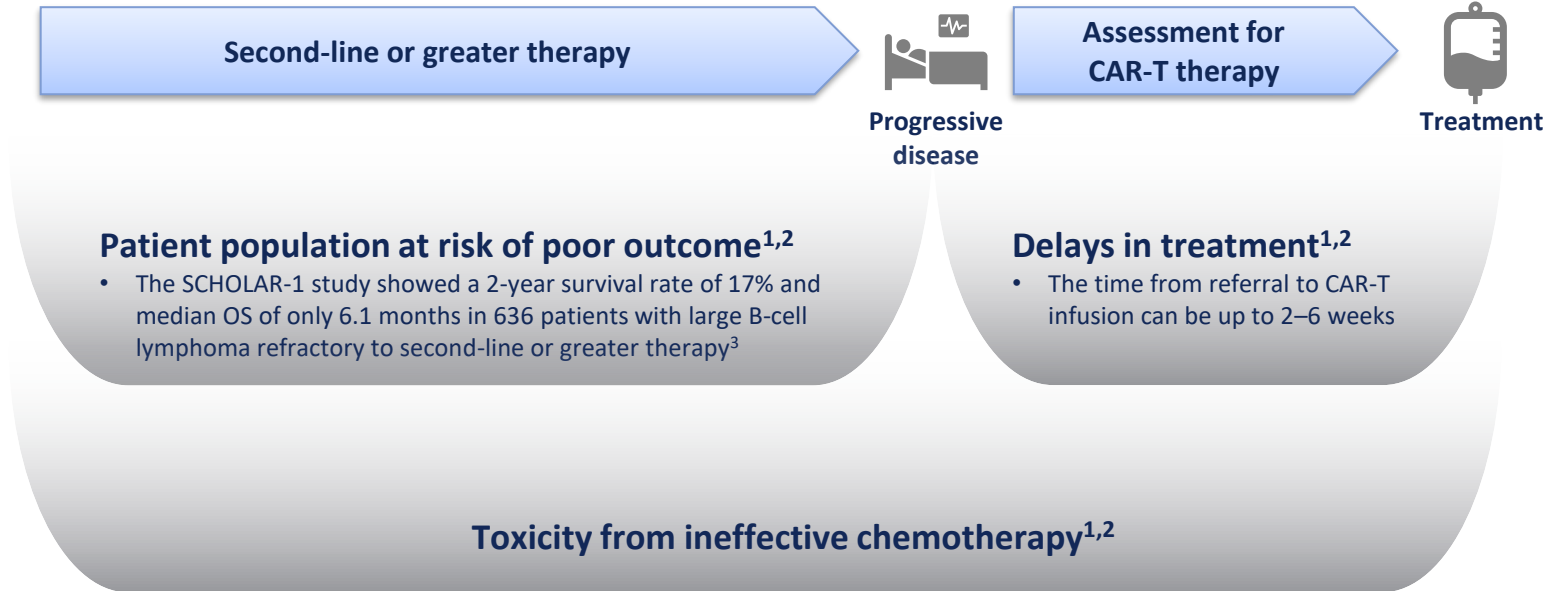
Axi-cel, axicabtagene ciloleucel; CAR-T, chimeric antigen receptor T-cells; CRS, cytokine release syndrome; ICANS, immune effector cell-associated neurotoxicity syndrome; ORR, overall response rate; Tisagen, tisagenlecleucel.

1. Sesques P, et al. EHA25 Virtual 2020 [poster EP1211]; 2. Locke FL, et al. *Lancet Oncol.* 2019;20:31–42. 3. Schuster SJ, et al. *N Engl J Med.* 2019;380:45–56.

A hand in a white lab coat sleeve holds a silver pen over a wireframe globe. The background is a blurred clinical setting. The text is overlaid in orange.

Why is early referral for CAR-T therapy important and how do we select patients for referral?

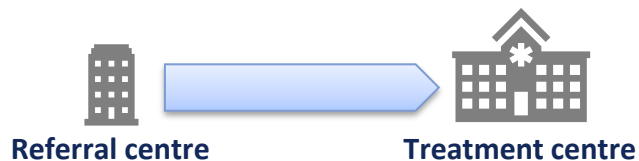
Importance of early referral for CAR-T therapy



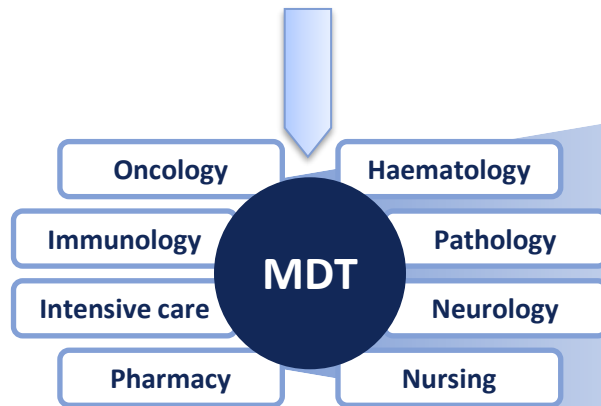
CAR-T, chimeric antigen receptor T-cell; HSCT, Hematopoietic stem cell transplant; ORR, overall response rate.

1. Chavez JC, et al. *Ther Adv Hematol.* 2019;10:1–20. 2. Jacobson CA, et al. *Oncologist.* 2020;25:e138–46. 3. Crump M, et al. *Blood* 2017;130:1800–8.

Role of a multidisciplinary team in the decision to treat and management of patients



The decision to treat a patient with CAR-T therapy is made by a MDT at a designated treatment centre¹⁻³



- Review of diagnosis and indication for treatment
- Evaluation of risks
- Clinical decision making
- Expert advice for complex cases
- Advice and review of informed consent
- Management of treatment, post-treatment and follow-up

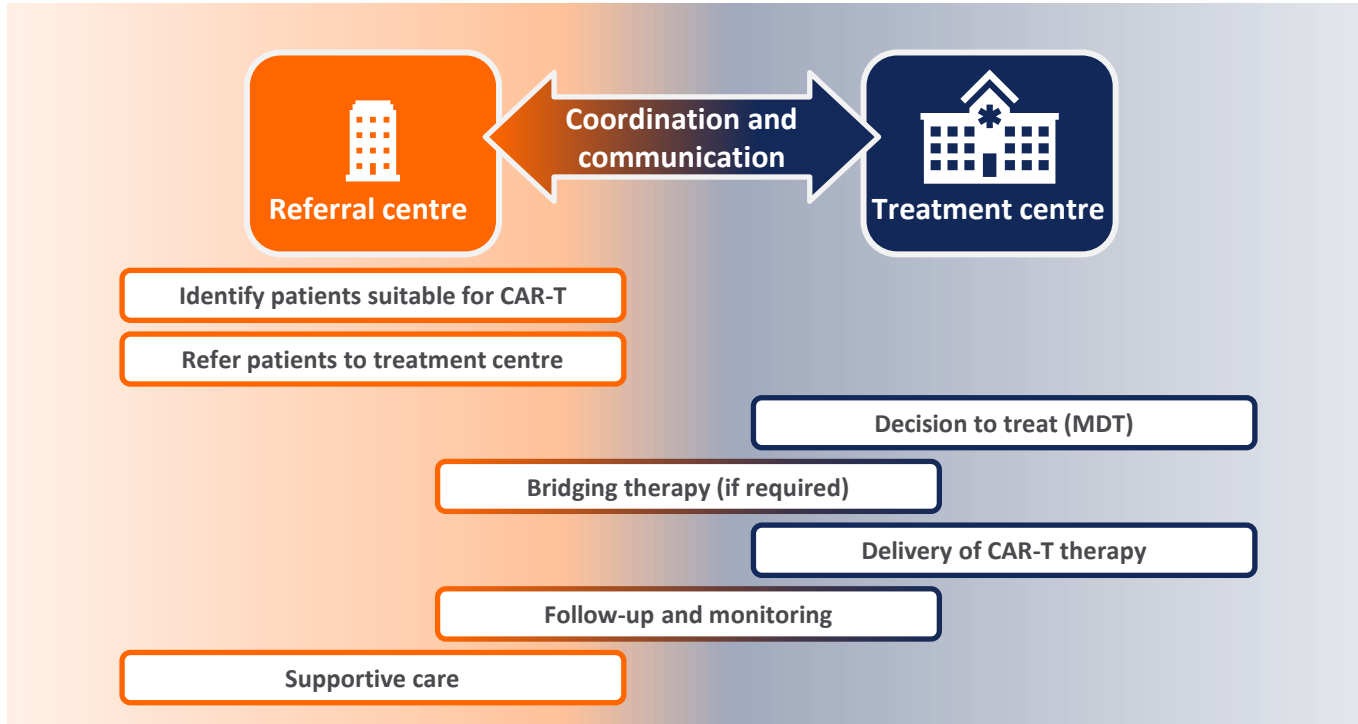
CAR-T, chimeric antigen receptor T-cell; MDT, multidisciplinary team.

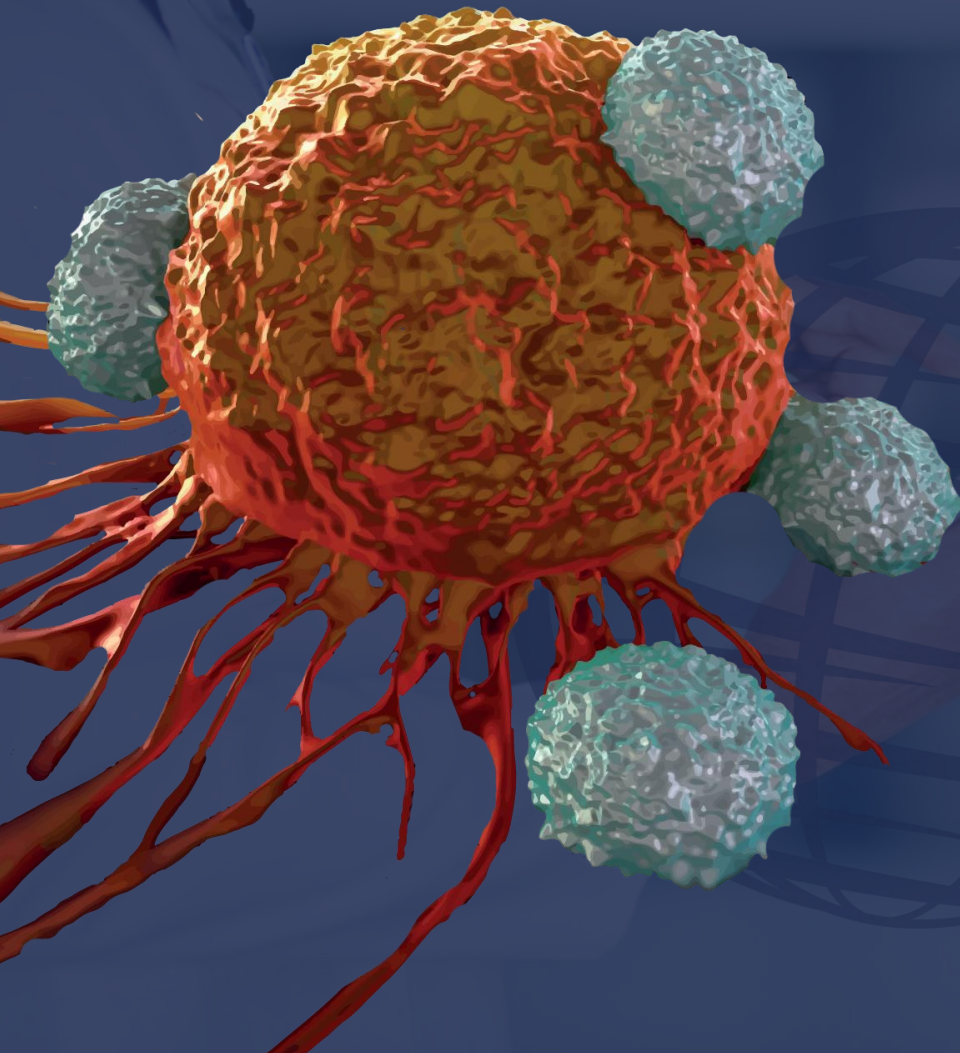
1. Chomiene C, et al. *HemaSphere*. 2019;03:04. 2. NHS England. CAR-T therapy. Service specification nos. 170100S and 170099S. Available at: www.england.nhs.uk/wp-content/uploads/2018/12/Tisagenlecleucel-Chimeric-Antigen-Receptor-T-Cell-CAR-T-Therapy-for-ALL-and-DLBCL.pdf and www.england.nhs.uk/wp-content/uploads/2018/12/Axicabtagene-Ciloleucel-Chimeric-Antigen-Receptor-T-Cell-CAR-T-Therapy-for-the-treatment-of-adult-patients-wit.pdf, respectively (accessed 3 July 2020). 3. Yakoub-Agha I, et al. *Haematologica*. 2020;105:297-316.

A hand in a white lab coat sleeve holds a silver pen, positioned as if writing on a large, semi-transparent globe graphic that is centered on the page. The background is a blurred clinical setting with a blue tint.

How can referral centres and treatment centres collaborate for optimal patient care?

The roles of referral and treatment centres at different stages of the patient pathway¹





**Thank you for watching
this on-demand event**

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