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Inicio  
Home

Indice del  
volumen  
Volume index

Comité Editorial  
Editorial Board

Comité Científico  
Scientific  
Committee

Normas para los  
autores  
Instruction to  
Authors

Derechos de autor  
Copyright

Contacto/Contact:



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## Editorial:

### **ARE CAR-T THE SOLUTION TO THE RECURRENCE OF DIFFUSE B-CELL LYMPHOMA?**

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Patients with diffuse large cell B lymphoma (DLBCL) who have a relapse or are refractory to a first-line chemotherapy treatment may receive different salvage chemotherapy regimens and subsequently an autologous stem cell transplant.

However, a significant percentage of these patients will not reach a sufficient response to access to transplantation or will relapse after it.

These patients have a highly adverse prognosis, and they will need novel treatments such as CARs (Chimeric Antigen Receptor).

CARs are Chimeric Antigen Receptors that redirect specificity and reprogram T cells functions in which they are genetically introduced. CARs targeting CD19 (cell surface molecule found in most B-cell lymphomas) have shown great activity against chemotherapy-refractory lymphomas, inducing long-term, complete remissions for more than 2 years in some patients.

In the prospective, interventional, and multicenter ZUMA-1 study,

treatment with Axicabtagene ciloleucel (autologous anti-chimeric CD 19 receptor T cells) achieved a response in 82% of patients and a complete response rate of 54 %. 101 patients were treated and after a median follow-up of 15.4 months, 42% of patients continued to respond (40% of them with a complete response), with an overall survival at 18 months of 52%<sup>1</sup>.

Schuster et al. using CAR-T directed against CD19 (CTL019) in patients with DLBCL describe complete remission in 43% of cases and with a median follow-up of 28.6 months, 86% of patients who had a response maintained it<sup>2</sup>.

High levels of CAR-T cells in blood have been shown to correlate with a better response.

However, CAR-T treatments are associated with hematologic side effects such as neutropenia, anemia, and thrombocytopenia, as well as other potentially fatal ones, including cytokine release syndrome and neurological toxicity that can lead to the death of the patient.

The management of side effects requires that these treatments must be received in specialised centres with experience in hematopoietic transplantation. Another issue that must be debated by the healthcare system is the high price of these treatments, which requires that a multidisciplinary team evaluate the indication in each patient in a careful way.

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