OS17-06 COMPARISON OF OUTCOMES AFTER CAR-T CELL THERAPY (TISAGENLECLEUCEL OR AXICABTAGENE CILOLEUCEL) IN PATIENTS AGED >70 YEARS WITH DIFFUSE LARGE B-CELL LYMPHOMA: CTIWP-EBMT

Vanderson Rocha (São Paulo, Brazil)

Authors: Vanderson Rocha[1], Jarl E. Mooyaart[2], Ron Ram[3], Katherine Clesham[4], Michael Daskalakis[5], Victoria Potter[6], Anne Sirvent[7], Peter Dreger[8], Christof Scheid[9], Anne Huynh[10], Nicolaus Kroeger[11], Eleni Tholouli[12], Lucia Lopez Corral[13], Caroline Besley[14], Matthew Collin[15], Ibrahim Yakoub-Agha[16], Jorinde D. Hoogenboom[2], Maiana H.M. Coelho[1], Ana Alarcon Tomas[17], Florent Malard[18], Jürgen Kuball[19], Anna Sureda[20], Ali Barzabachi[21], Annalisa Ruggeri[22]

1. *São Paulo University, São Paulo, Brazil,*
2. *Leiden University, Leiden, Netherlands (the),*
3. *Tel Aviv Sourasky Medical Center, Tel Aviv, Israel,*
4. *University College London Hospital, London, United Kingdom of Great Britain and Northern Ireland (the),*
5. *University Hospital Bern, Bern, Switzerland,*
6. *Kings College Hospital, London, United Kingdom of Great Britain and Northern Ireland (the),*
7. *CHU Lapeyronie, Montpellier, France,*
8. *University of Heidelberg, Heidelberg, Germany,*
9. *University of Cologne, Cologne, Germany,*
10. *Institut Universitaire du Cancer Toulouse, Toulouse, France,*
11. *University Hospital Eppendorf, Hamburg, Germany,*
12. *Manchester Royal Infirmary, Manchester, United Kingdom of Great Britain and Northern Ireland (the),*
13. *Hospital Clinico, Salamanca, Spain,*
14. *University Hospitals Bristol and Weston NHSFT, Bristol, United Kingdom of Great Britain and Northern Ireland (the),*
15. *Royal Victoria Infirmary - RVI, Newcastle, United Kingdom of Great Britain and Northern Ireland (the),*
16. *Centre Hospitalier Universitaire de Lille, Lille, France,*
17. *Clinica Puerta de Hierro, Madrid, Spain,*
18. *Hôpital Saint Antoine, AP-HP, Paris, France,*
19. *University Medical Center Utrecht, Utrecht, Netherlands (the),*
20. *Catalan Institute of Oncology Duran Reynals Hospital, Barcelona, Spain,*
21. *American University of Beirut, Beirut, Lebanon,*
22. *San Raffaele Scientific Institute, Milan, Italy*

Abstract

Background:

Chimeric Antigen Receptor (CAR) T-cell therapy has shown remarkable efficacy in treating B-cell lymphomas. However, the application of CAR T-cell therapy in older patients, particularly those over 70 years old, requires special considerations due to the unique challenges posed by this population.

Methods:

With the aim to analyze outcomes after CAR-T cell therapy for DLBC lymphoma, we analyzed 742 patients (≥70 years old) given Tisa-cel (n=337) or Axi-cel (n=405), using univariate (Kaplan-Meier and cumulative incidence) and multivariable Cox models. The median age was 74 years

(70-89) and the median follow up time for survivors was 12.8 months (6- 24). The majority of pts are confirmed to have received CAR-T as 3rd line treatment, and in advanced disease (60%). There was a statistically trend of having older patients (0.06), and higher number of patients with ECOG>=2 in the Tisa-cel group compared with Axi-cel (Table 1).

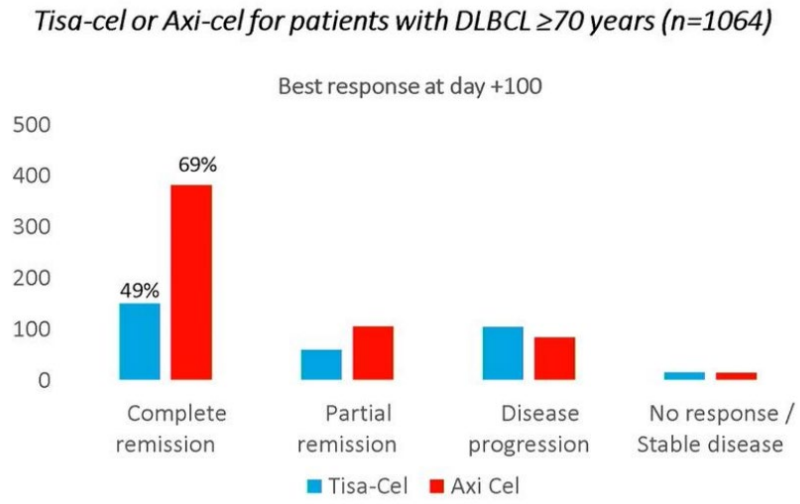
Results:

At 1-year, overall survival (OS) and progression- free survival (PFS) of all patients were 58% and 43% respectively. Interestingly, there were no statistically difference for OS and PFS of patients aged 70-74 compared to ≥75 years old. At day+30, cumulative incidence of CRS (any grade) and ICANS (any grade) after Tisa-cel were 72% and 24% compared to 84% (p=0.005) and 51% (p<0.001) for Axi-cel respectively. Among patients for whom CRS was observed within 100 days, 53% had grade 2 or higher. For Tisa-cel patients grade 4 CRS was reported for 6 patients and for Axi-cel patients 2 had grade 4 and 1 had grade 5. Among Tisa-cell patients for whom ICANS was observed within 100 days 59% had grade 2 or higher, for Axi-cel patients this was 73%. At 1-year, unadjusted OS, PFS and relapse incidence were 53%, 34% and 53% for patients given Tisa-cel compared to 62% (p=0.02), 51%(p<0.001) and 34% (p<0.001) for those given Axi-cel. At 1-year, cumulative incidence of non-relapse mortality (NRM) was 13% for Tisa-cell and 15% for Axi-cell (p=0.25). In multivariate analysis adjusting for differences between the two groups patients given Axi-cel had improved OS (HR=0.73, 95%CI 0.58-0.93, p=0.01) and PFS (HR=0.59, 95%CI 0.48-0.72, p<0.001[JM1]).

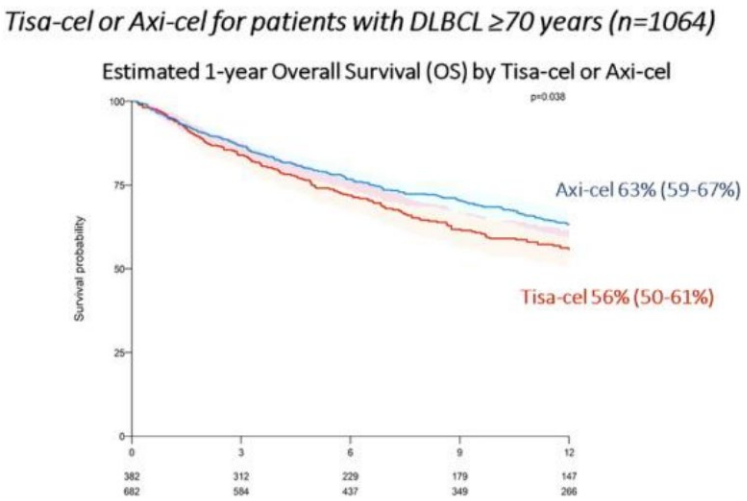
Disease Status before CAR-T Infusion

Characteristics	Tisa-cel (N = 382)	Axi-cel (N = 682)	p-value
Disease Status			0.039
CR (Complete Response)	40 (11%)	64 (10%)	
PR (Partial Response)	78 (21%)	178 (28%)	
Relapse/Progression	222 (61%)	330 (52%)	
Stable Disease	26 (7.1%)	57 (9.1%)	
Prior auto HSCT	51 (13%)	85 (12%)	0.7
Number of Previous Non-HSCT Lines			
1	63 (31%)	174 (42%)	
2	39 (19%)	91 (22%)	
3	56 (28%)	85 (20%)	
>=4	43 (21%)	64 (15%)	
Interval days (Apheresis to Infusion)	49 (41, 66)	39 (34, 48)	<0.001
Lymphodepletion regimen			
Cyclophosphamide + Fludarabine	357 (93.7%)	639 (93.9%)	
Others	24 (6.3%)	42 (6.1%)	

Response Rates for >70y Patients



OS for >70y Patients



PFS for >70y Patients