THE CNS-IPI SCORE IS PREDICTIVE OF SEVERE ICANS AFTER AXI-CEL TREATMENT IN PATIENTS WITH LBCL

Sergi Camarillas[1], Samantha Feijoo[2], Anna Aguilera[2], Corrado Benevolo[3], Víctor Navarro[2], Maria Landwehr[1], Andreu Vilaseca[1,4], Helena Ariño[1,4], Cecilia Carpio[1,2], Mario Sánchez-Salinas[1,2], Pau Abrisqueta[1,2], Francesc Bosch[1,2], Pere Barba[1,2] and Gloria Iacoboni[1,2]

[1]Vall d'Hebron University Hospital, Barcelona, Spain; [2]Vall d'Hebron Institute of Oncology (VHIO), Barcelona, Spain; [3]Candiolo Cancer Institute, Candiolo, Italy; [4]Centre d'Esclerosi Múltiple de Catalunya (CEMCAT), Barcelona, Spain

INTRODUCTION

Chimeric antigen receptor (CAR) T-cell therapy has significantly improved the prognosis of patients with relapsed/refractory (R/R) large B-cell lymphoma (LBCL). However, it is frequently associated with acute toxicities, such as cytokine release syndrome (CRS) and immune effector cell-associated neurotoxicity (ICANS).

AIM

In this study, we aimed to assess risk factors for ICANS and to evaluate the utility of previously described prognostic scores in predicting its incidence and severity.

METHODS

Retrospective, single-center study
R/R LBCL
Treated with axi-cel (Nov 2019 – Jun 2025)

Identification of parameters / scores associated with ICANS and severe ICANS at lymphodepleting chemotherapy (LDC)

Uni/multivariate logistic regression analysis

- ICANS Vs. NO ICANS
- SEVERE ICANS* Vs. NON-SEVERE ICANS

*ICANS G≥3

RESULTS

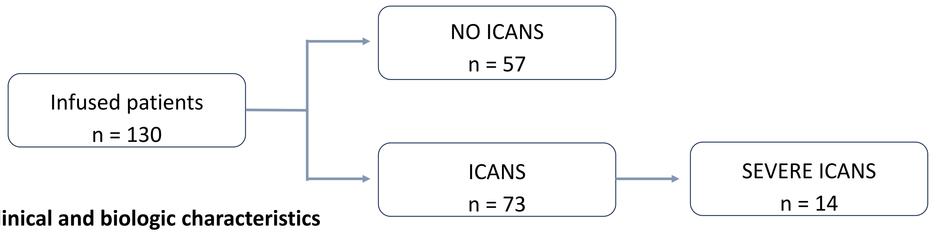
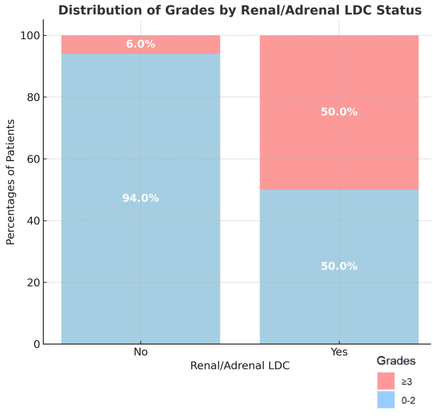
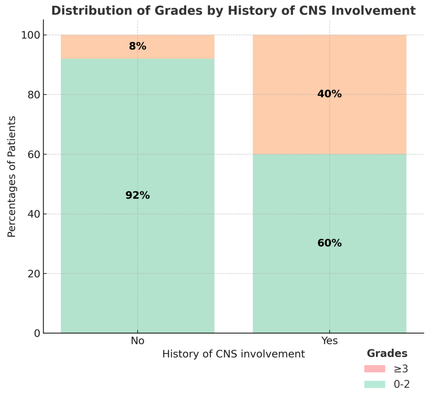


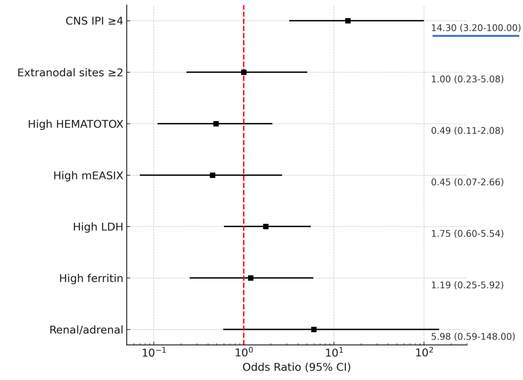
Table 1. Clinical and biologic characteristics

	Total cohort n = 130	NO-ICANS n = 57	ICANS n = 73	p
Male, n (%)	77 (60)	38 (67)	39 (54)	0.2
Age at infusion, median (range)	58 (23-74)	57 (23-74)	59 (24-65)	0.3
Histology				
DH, n (%)	15 (12)	7 (13)	8 (11)	0.8
Transformed, n (%)	34 (26)	18 (32)	16 (22)	0.2
Previous treatment				
≥3 previous lines, n (%)	20 (15)	9 (16)	11 (15)	>0.9
ASCT, n (%)	29 (22)	16 (28)	13 (18)	0.2
Primary refractory, n (%)	67 (52)	28 (49)	39 (55)	0.6
Bridging therapy, n (%)	103 (80)	38 (67)	65 (90)	**0.002**
Stage and risk at LDC				
Stage III-IV, n (%)	98 (75)	39 (68)	59 (81)	0.2
≥2 extranodal sites, n (%)	41 (32)	8 (14)	33 (45)	**<0.001**
Bulky, n (%)	26 (20)	10 (18)	16 (22)	0.7
CNS involvement, n (%)	10 (8)	0	10 (14)	**0.002**
Renal/adrenal involvement, n (%)	15 (12)	2 (3.5)	13 (18)	**0.012**
CNS-IPI ≥4, n (%)	23 (18)	2 (4)	21 (29)	**<0.001**
Analytics at LDC				
Ferritin, median (IQR)	346 (601)	248 (469)	422 (874)	**0.026**
High RCP, n (%)	34 (26)	13 (23)	21 (29)	0.4
LDH, median (IQR)	250 (21.3)	235 (136)	259 (172)	0.06
HEMATOTOX ≥2, n (%)	51 (39)	15 (26)	36 (49)	**0.011**
mEASIX, median (IQR)	1.32 (2.7)	1.36 (1.7)	1.20 (4.35)	0.52
Toxicity				
CRS any grade, n (%)	117 (90)	44 (77)	73 (100)	**<0.001**
CRS grade ≥3	15 (12)	6 (10)	9 (12)	0.2
Tocilizumab exposure, n (%)	57 (44)	16 (28)	41 (56)	**0.015**

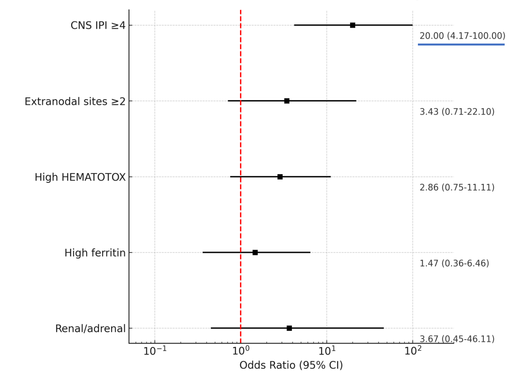




Parameters associated with ICANS (multivariate)



Parameters associated with severe ICANS (multivariate)



CONCLUSIONS

A high CNS-IPI at LDC identified patients at high risk of developing severe ICANS after axi-cel therapy. This may allow tailoring the prophylactic and therapeutic management of this adverse event.

CONTACT

sergi.camarillas@vallhebron.cat