CAR-T – ASH 2024

איל לבל, הדסה

Ciltacabtagene Autoleucel vs Standard of Care in Patients With Lenalidomide-Refractory Multiple Myeloma After 1–3 Lines of Therapy: Minimal Residual Disease Negativity in the Phase 3 CARTITUDE-4 Trial

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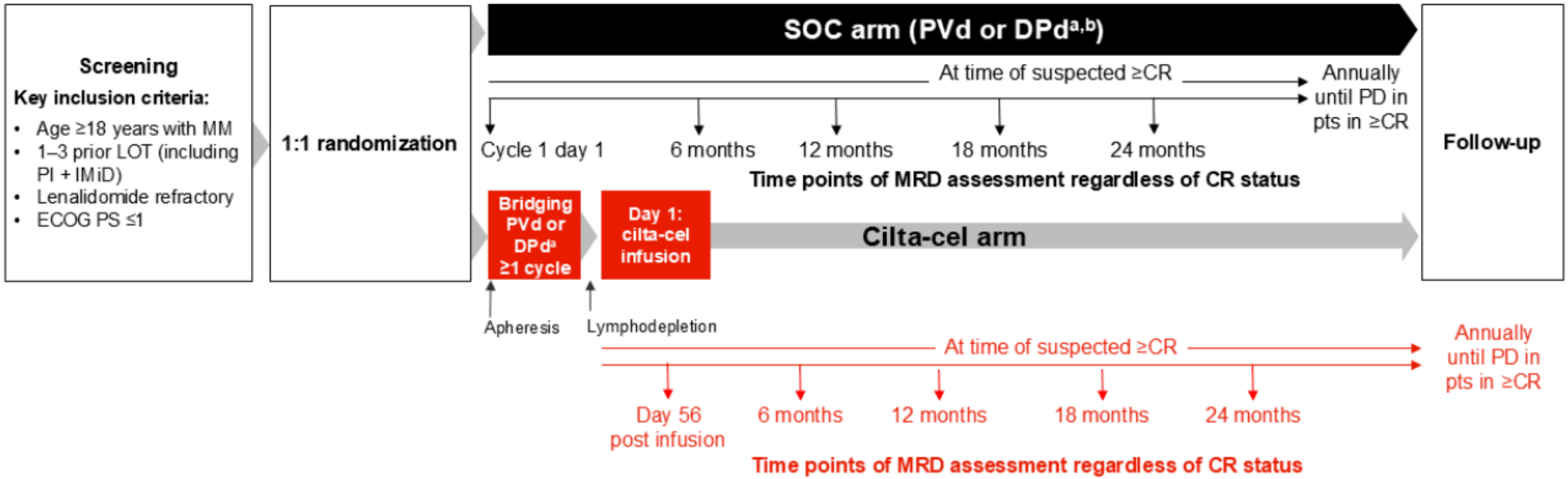
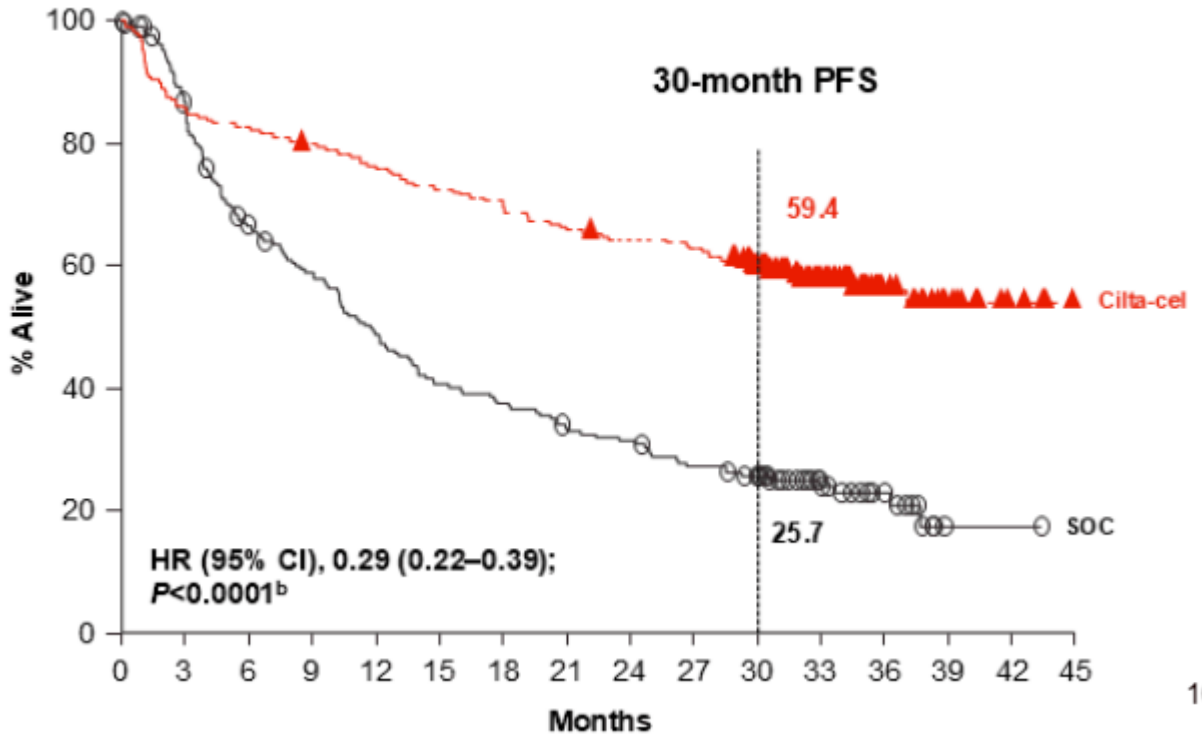
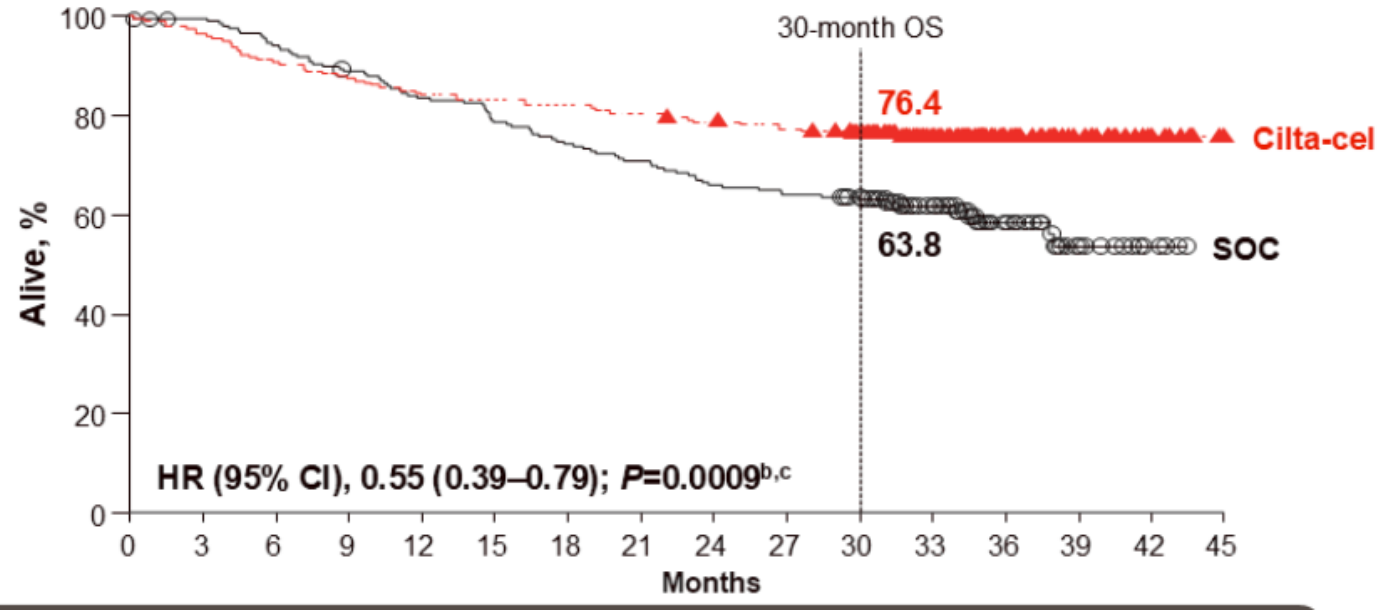
CARTITUDE-4: Study Design and MRD Assessments



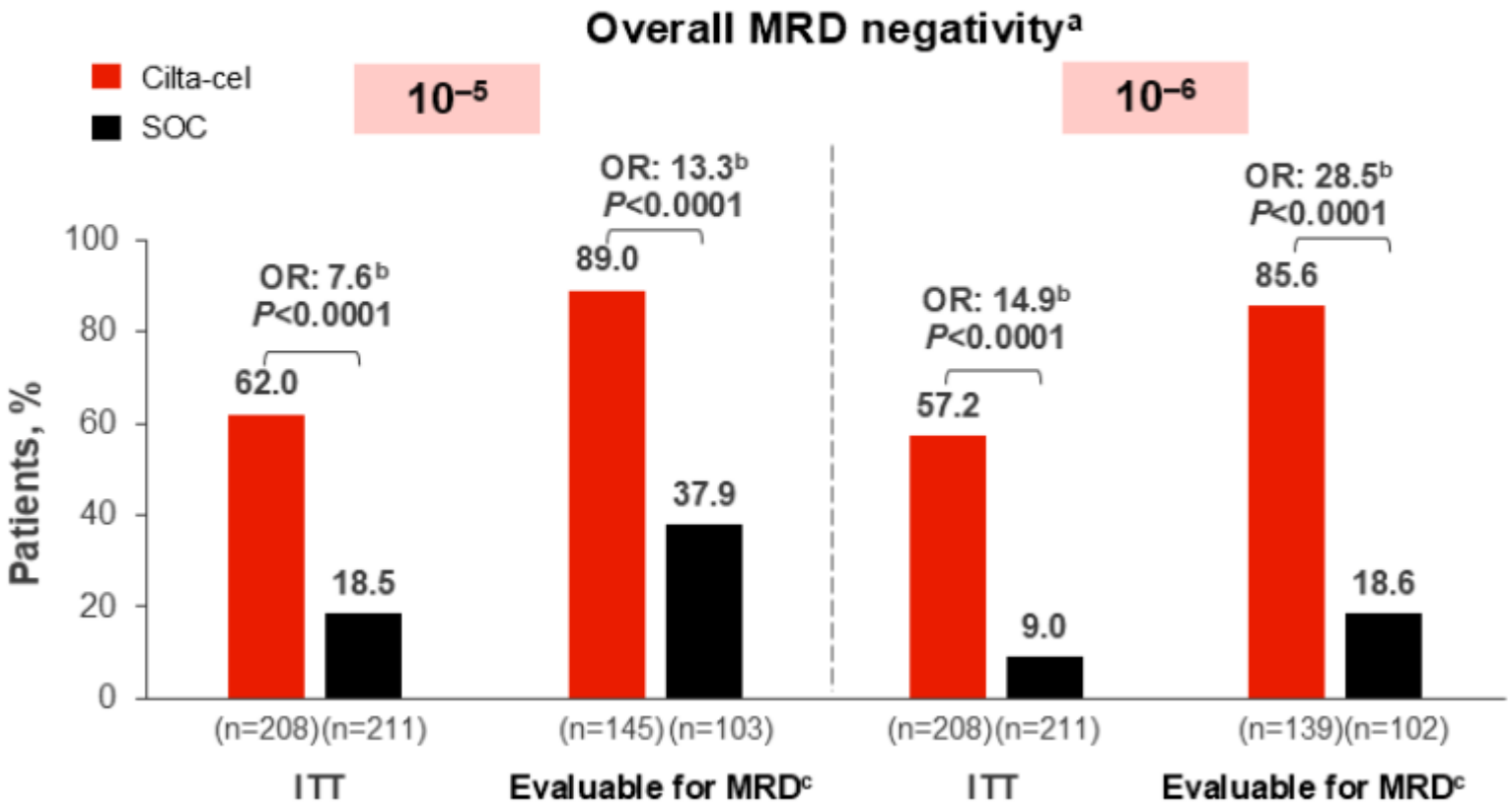
PFS in the ITT population, 33.6 months median follow-up

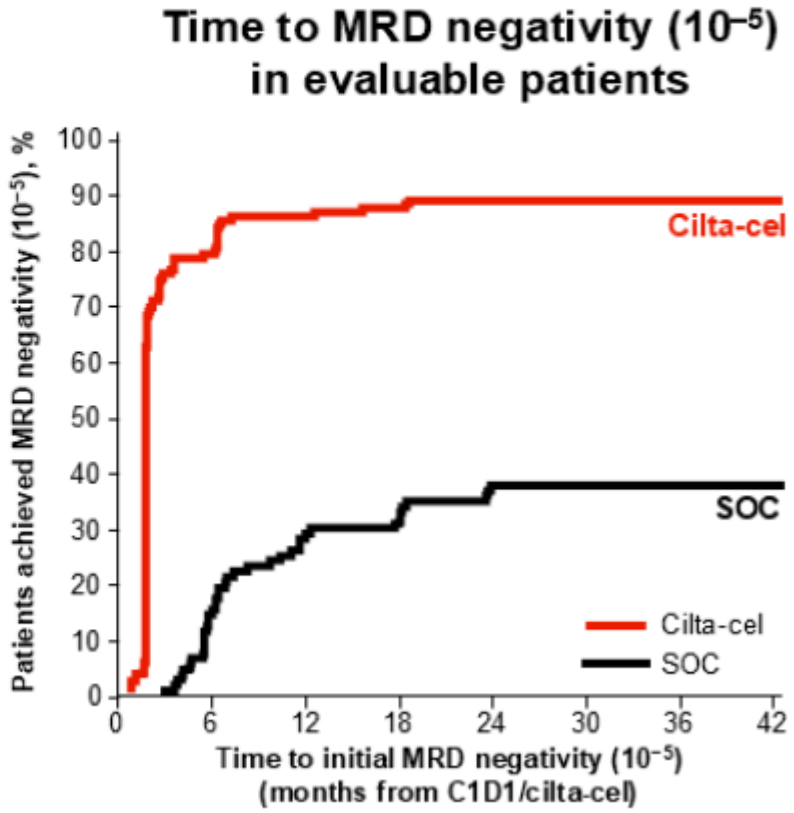


OS in the ITT population, 33.6 months median follow-up



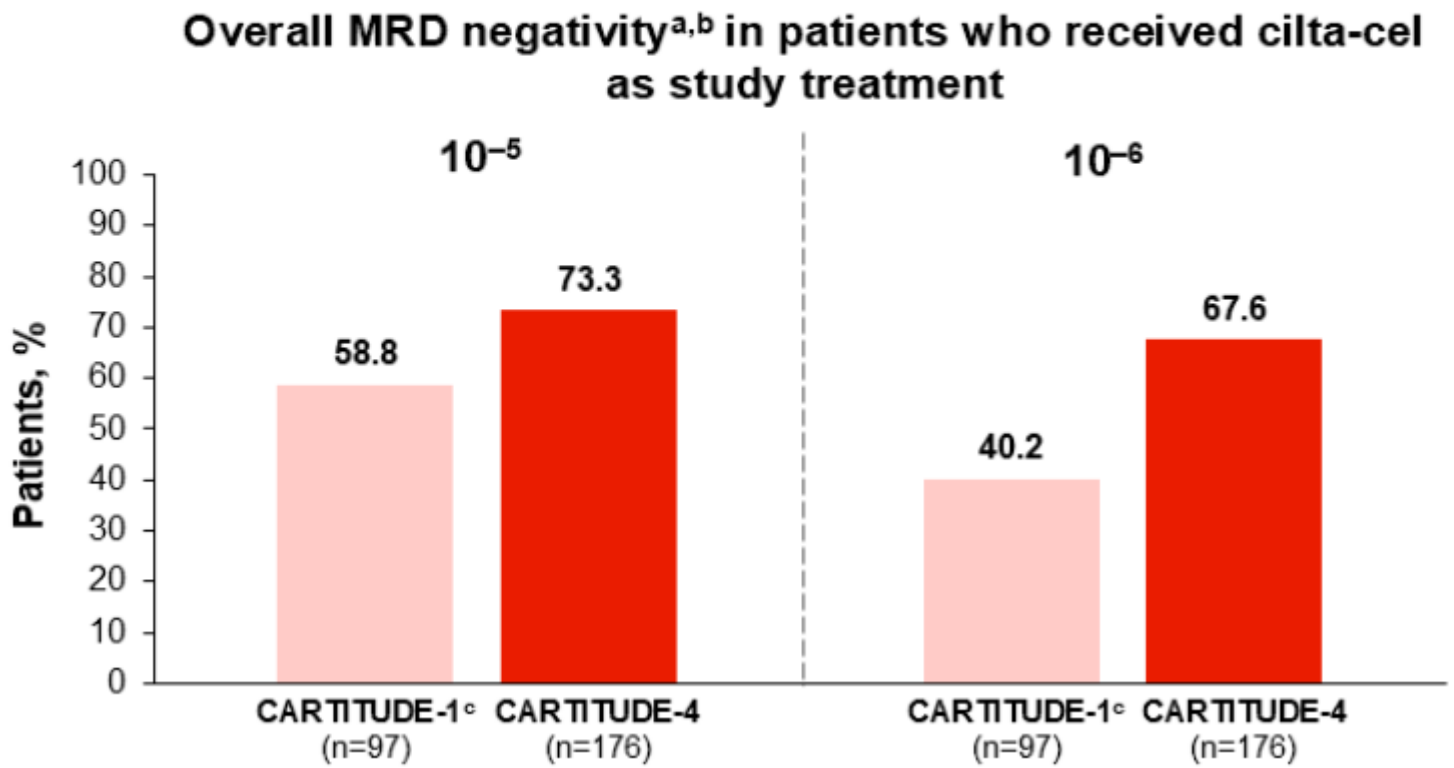
CARTITUDE-4: Overall MRD Negativity





- 69% of evaluable patients achieved MRD negativity (10^{-5}) by day 56 (ITT, 48%), rising to 86% (ITT, 60%) by 6 months post cilta-cel infusion

MRD Negativity in CARTITUDE-4 vs CARTITUDE-1



	CARTITUDE-1 (n=97)	CARTITUDE-4 (n=176)
30-month PFS rate, %	54.2	68.4
30-month OS rate, %	68.0	84.3

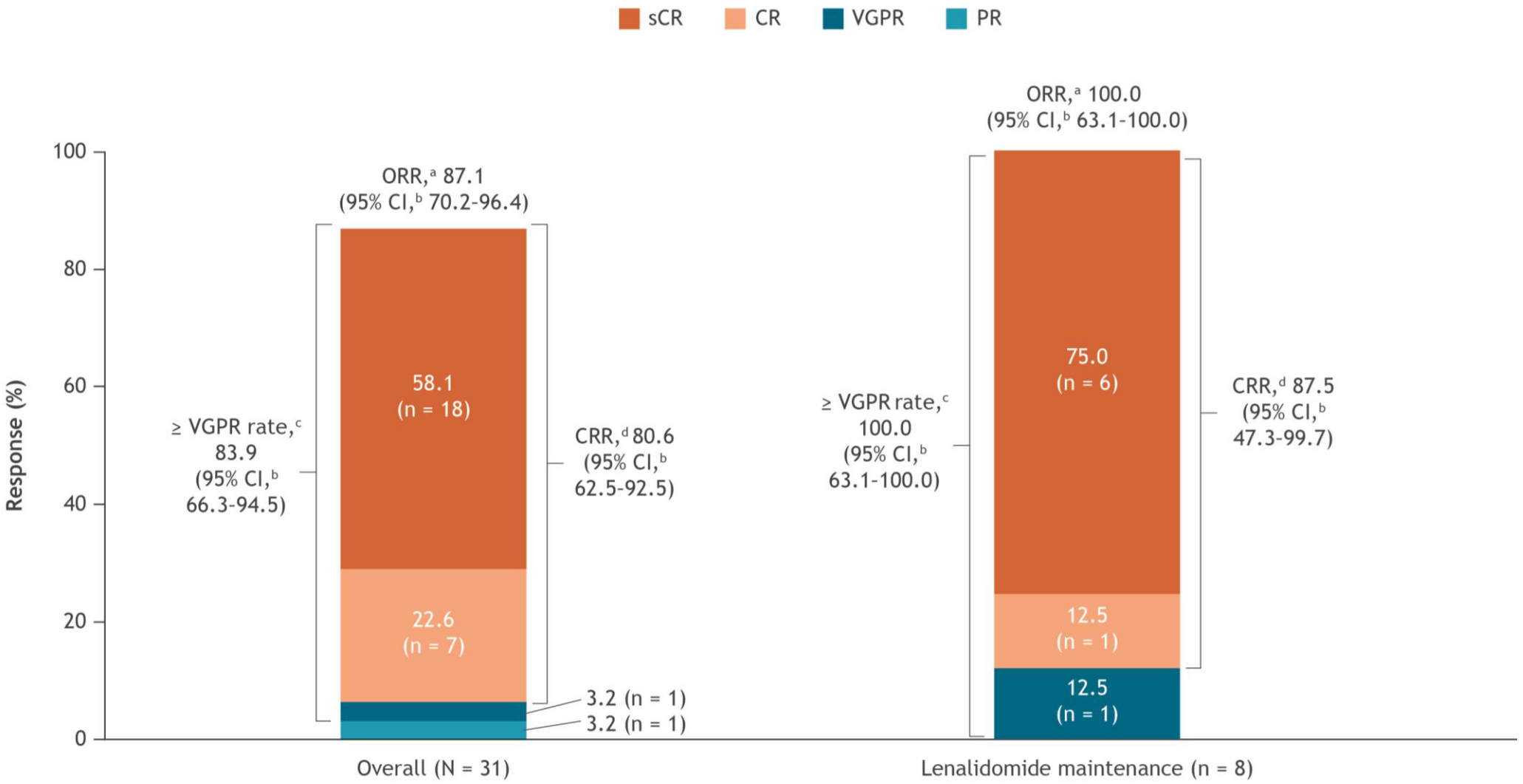
Idecabtagene vicleucel in patients with newly diagnosed multiple myeloma with an inadequate response to front-line autologous stem cell transplantation: KarMMa-2 cohort 2c extended follow-up

Barry Paul,[1] Madhav V. Dhodapkar,[2] Melissa Alsina,[3] Jesús G. Berdeja,[4] Shambavi Richard,[5] Ravi Vij,[6] Xavier Leleu,[7] Daniel N. Egan,[8] P. Leif Bergsagel,[9] Ran Reshef,[10] Saad Z. Usmani,[11] Debashree Basudhar,[12] Ethan G. Thompson,[12] Fan Wu,[12] Laurie Eliason,[12] Soyun Park,[12] Sinhan Tran,[12] Maria Chaudhry,[12] David Siegel,[13] Krina K. Patel[14]

Cohort 2c includes patients with NDMM who achieved < VGPR after front-line ASCT

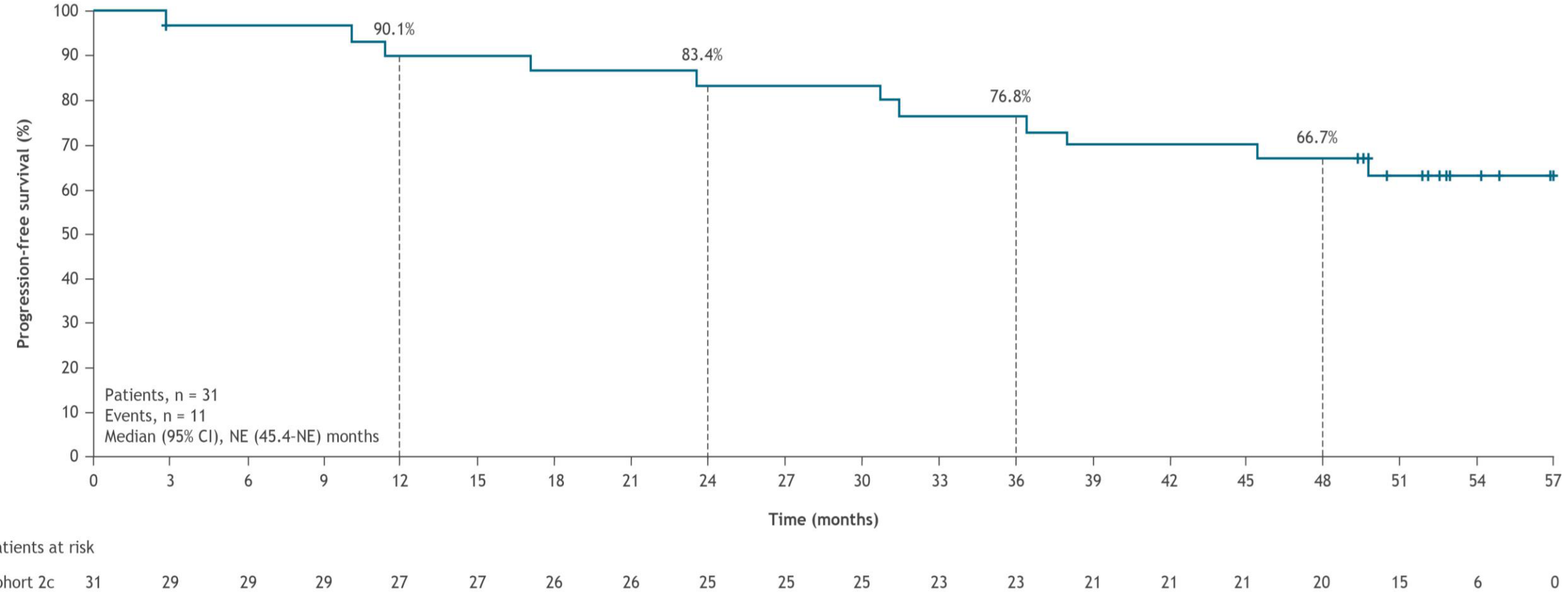
Abstract number 3388

Figure 2. Best overall response in treated patients



[a]Patients with ≥ PR (2 patients had MR and 2 had SD). [b]Clopper-Pearson CI. [c]Patients with sCR, CR, or VGPR. [d]Patients with sCR or CR.
CR, complete response; MR, minimal response; ORR, overall response rate; PR, partial response; sCR, stringent complete response; SD, stable disease; VGPR, very good partial response.

Figure 4. Progression-free survival



Crosses represent censoring. FDA censoring rule; (censoring date – ide-cel infusion date + 1) / 30.4375.
NE, not evaluable.

Updated Comparative Efficacy of Ciltacabtagene Autoleucel Versus Idecabtagene Vicleucel in Patients With Relapsed or Refractory Multiple Myeloma Previously Treated With 2–4 Prior Lines of Therapy Using a Matching-Adjusted Indirect Comparison

Nieves Lopez-Muñoz[1], Noffar Bar[2], Joris Diels[3], Suzy Van Sanden[3], João Mendes[4], Seina Lee[4], Teresa Hernando Martin[5], Nikoletta Lendvai[6], Nitin Patel[7], Tadao Ishida[8], Jeremy Er[9], Simon J Harrison[10], Urvi A. Shah[11]

[1]Hospital Universitario 12 de Octubre, Madrid, Spain; [2]Yale University School of Medicine and Yale Cancer Center, New Haven, CT, USA; [3]Janssen Pharmaceutica NV, Beerse, Belgium; [4]Janssen Global Services, LLC, Raritan, NJ, USA; [5]Janssen-Cilag, Madrid, Spain; [6]Janssen Research & Development, Raritan, NJ, USA; [7]Legend Biotech USA Inc., Somerset, NJ, USA; [8]Japanese Red Cross Medical Center, Tokyo, Japan; [9]Peter MacCallum Cancer Centre, Melbourne, Victoria, Australia; [10]Clinical Haematology and Centre of Excellence for Cellular Immunotherapy, Peter MacCallum Cancer Centre and Royal Melbourne Hospital, Melbourne, Victoria, Australia; [11]Memorial Sloan Kettering Cancer Center and Weill Cornell Medical College, NewYork, NY

Baseline Characteristics Before and After Population Adjustment

- 85 patients were included in the cilta-cel cohort after applying the KarMMa-3 inclusion and exclusion criteria
- After population adjustment, the baseline characteristics of the cilta-cel cohort matched the reported average baseline characteristics of the ide-cel population from KarMMa-3

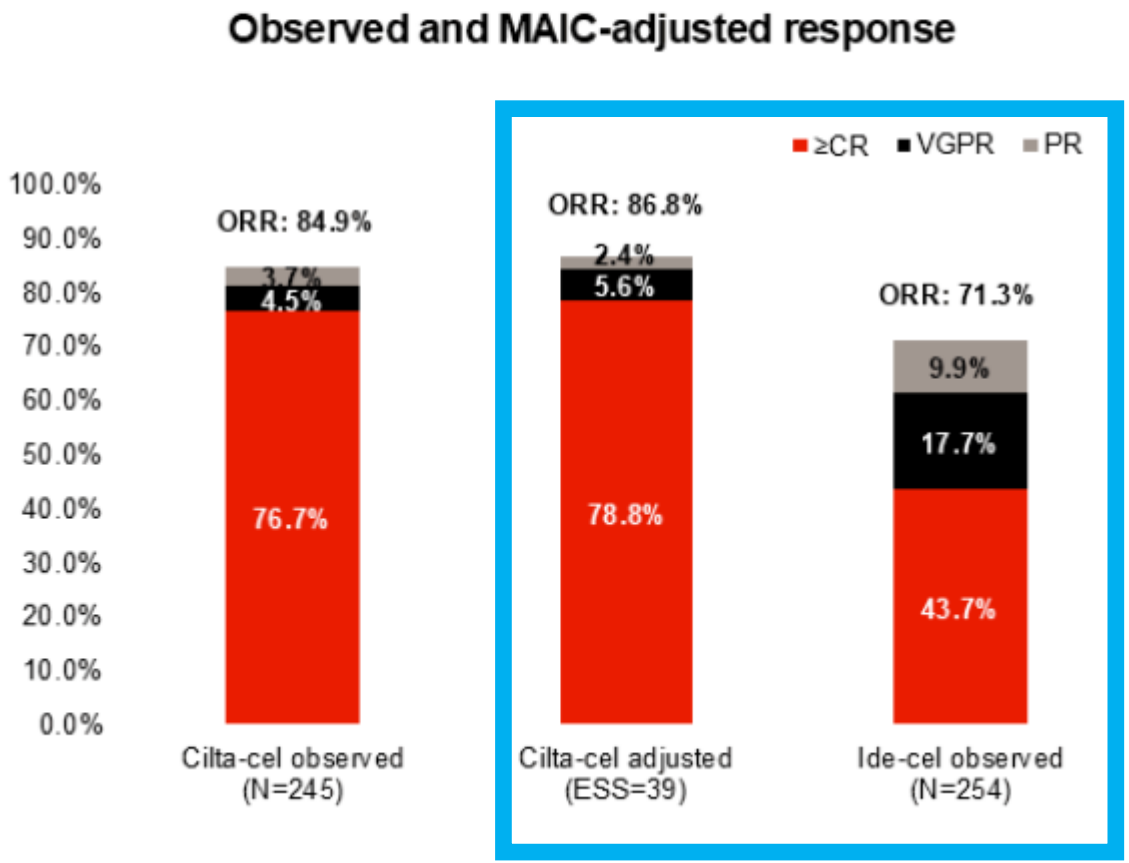
Baseline characteristics[a] matched: base case

Baseline characteristics matched		Cilta-cel observed N=245	Ide-cel observed N=254	Cilta-cel adjusted (N=79[b]; ESS=39[c])
Refractory status	Refractory to lenalidomide	97%	73%	73%
	Non-triple refractory	76%	35%	35%
	Triple-/quadruple-refractory	19%	59%	59%
	Penta-refractory	5%	6%	6%
	Refractory to PI	55%	74%	74%
	Refractory to CD38	36%	95%	95%
Cytogenetic risk	High risk	54%	42%	42%
R-ISS stage	I	24%	22%	22%
	II	71%	65%	65%
	III	5%	13%	13%
Time to progression	Median TTP on last treatment (months)	13.8	7.1	7.3
EMD	Yes	20%	24%	24%
Tumor burden	High	27%	28%	28%

Additional baseline characteristics[a] adjusted: sensitivity analysis

Baseline characteristics matched		Cilta-cel observed N=245	Ide-cel observed N=254	Cilta-cel adjusted (N=79[b]; ESS=32[d])
Prior lines	Median number	2	3	3
Time from diagnosis to screening	Median time from diagnosis to screening (years)	3.2	4.1	4.4
Age	<65	61%	59%	50%
	65 to 75	36%	36%	48%
	≥75	3%	5%	2%
Prior transplant	Yes	83%	84%	88%
ECOG PS	1+	48%	53%	53%
Race	White	84%	86%	85%
	Black	6%	9%	9%
	Other	10%	5%	6%
Sex	Male	57%	61%	56%

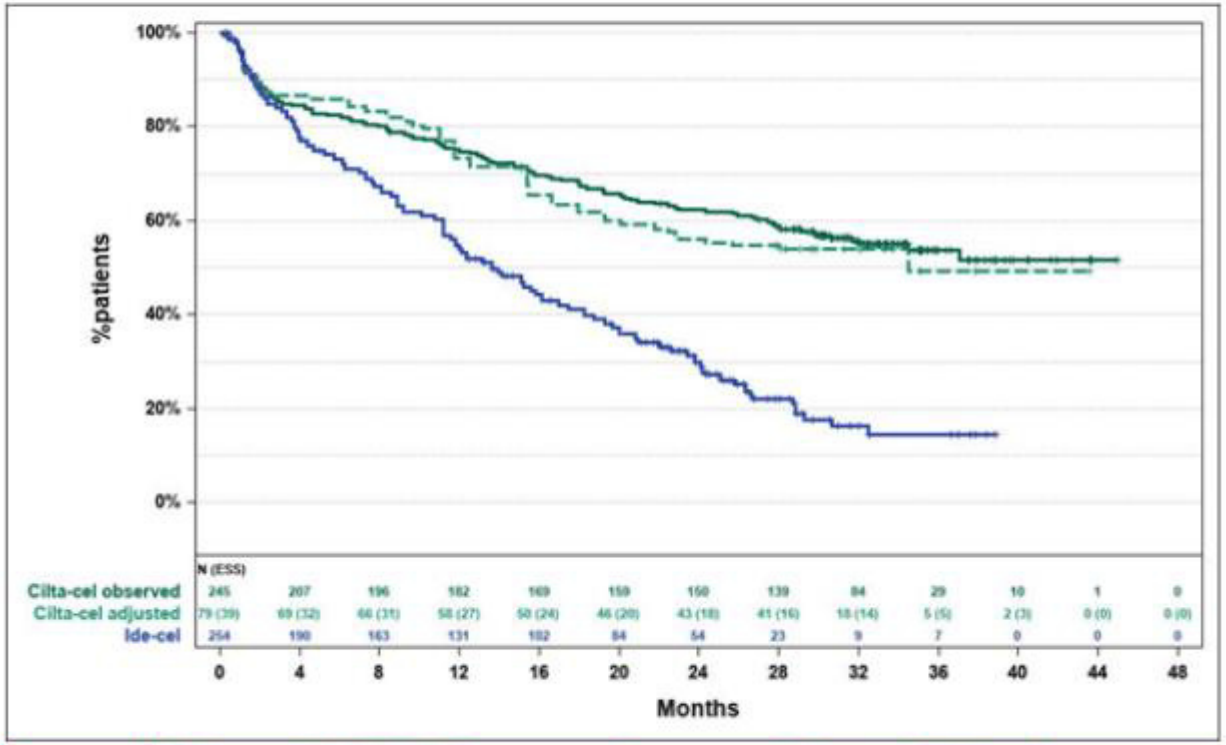
Patients Who Received Cilta-cel Were More Likely to Respond to Treatment and to Achieve Deep Responses



	Response			Comparative Efficacy of Response Cilta-cel vs Ide-cel RR[a] (95% CI)	
	Cilta-cel		Ide-cel		
	Observed	Adjusted	Observed	Adjusted	P-value
ORR	84.9%	86.8%	71.3%	1.22 (1.08, 1.38)	0.0126
≥VGPR	81.2%	84.4%	61.4%	1.37 (1.19, 1.59)	0.0009
≥CR	76.7%	78.8%	43.7%	1.80 (1.49, 2.18)	<0.0001

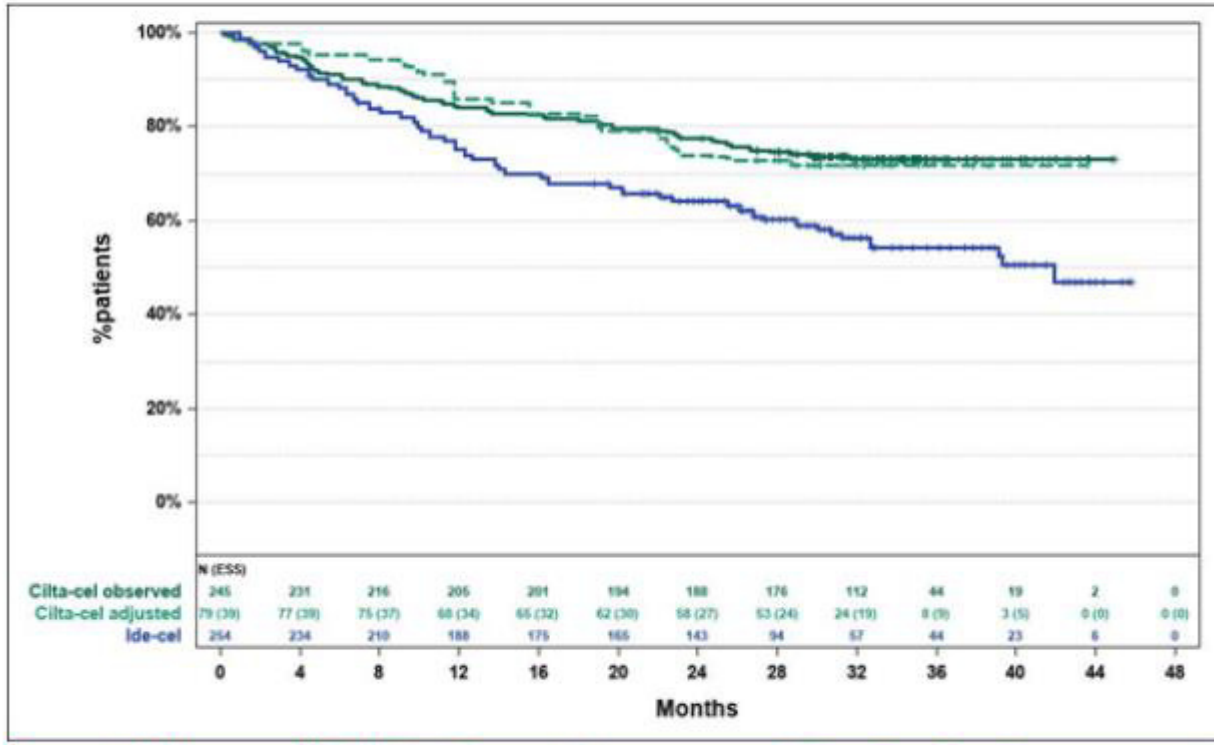
Cilta-cel Was Associated With Reductions in Risk of Disease Progression or Death and in Risk of Death vs Ide-cel

Comparative efficacy of PFS for cilta-cel vs ide-cel



Median, months (95% CI)			Cilta-cel vs Ide-cel HR[a] (95% CI)		
Cilta-cel		Ide-cel			
Observed	Adjusted	Observed	Observed	Adjusted	P-value
NE	34.5 (15.5, NE)	13.7 (11.6, 16.1)	0.39 (0.30, 0.49)	0.42 (0.26, 0.68)	0.0004

Comparative efficacy of OS for cilta-cel vs ide-cel



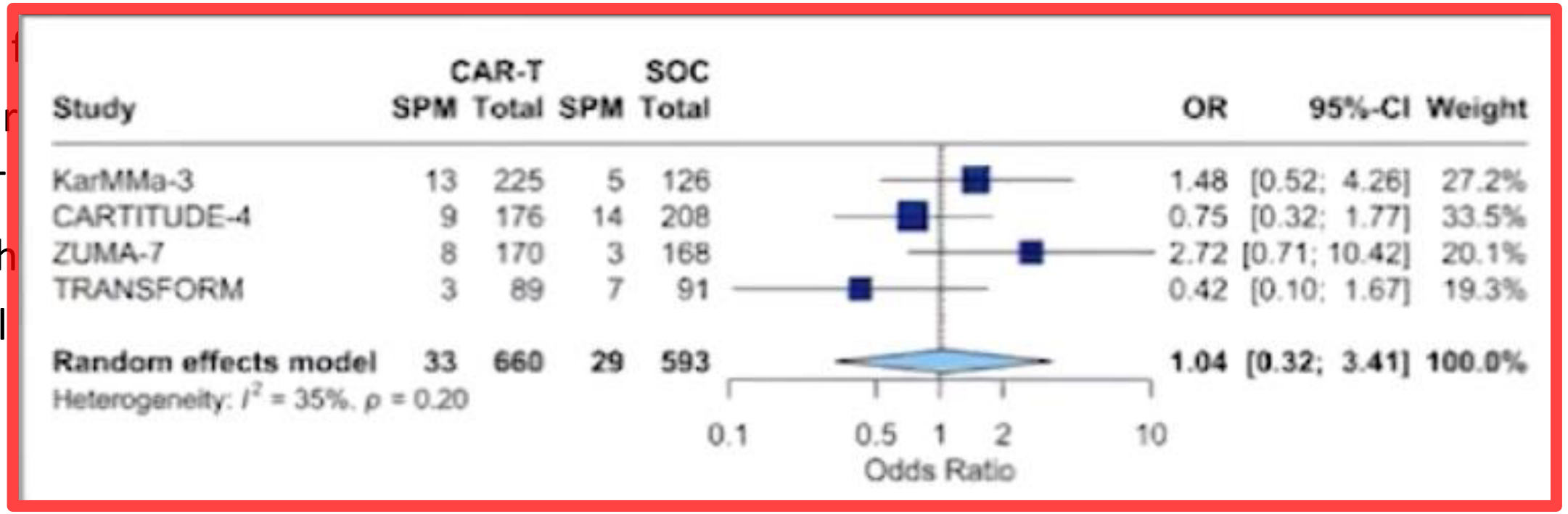
Median, months (95% CI)			Cilta-cel vs Ide-cel HR[a] (95% CI)		
Cilta-cel		Ide-cel			
Observed	Adjusted	Observed	Observed	Adjusted	P-value
NE	NE	41.9 (31.2, NE)	0.54 (0.40, 0.74)	0.58 (0.34, 0.99)	0.0452

902.HEALTH SERVICES AND QUALITY IMPROVEMENT: LYMPHOID MALIGNANCIES | NOVEMBER 5, 2024

Systematic Review of Secondary Primary Malignancies (SPMs) in Patients Treated with Chimeric Antigen Receptor T-Cell (CAR-T) Therapies

Mounzer E Agha, Sarah McGregor, Kevin C De Braganca, Tamar Lengil, Victoria Alegria, Denise De Wiest, Matthew Perciavalle, Ravi Potluri, Sandip Ranjan, Ahmed Mohamed, Helen Pai, Todd Bixby, Zaina P Qureshi, Peter M. Voorhees

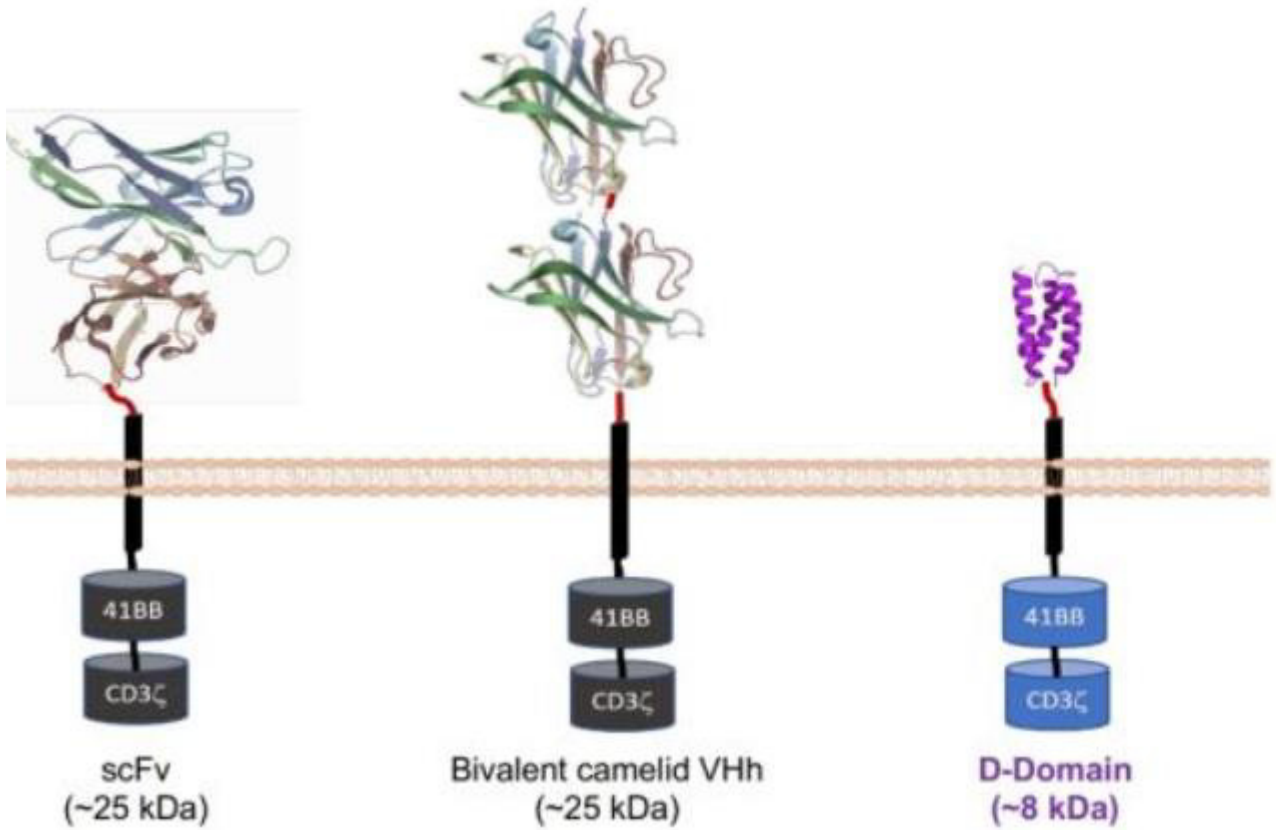
- 89 publications from CART interventional/observational studies: lymphoma, MM, ALL
- MM- Rates of 0-20% median 5/9%, IQR 4.6-9.7%
- Time f
- SPM r
- CART
- But, h
- T-cell



1031 Phase 2 Registrational Study of Anitocabtagene Autoleucel for the Treatment of Patients with Relapsed and/or Refractory Multiple Myeloma: Preliminary Results from the IMMagine-1 Trial

Anitocabtagene autoleucel (anito-cel/CART-ddBCMA)

Autologous BCMA-directed CAR T-cell therapy using a novel, D-Domain binder[1]



scFv (~25 kDa)

Bivalent camelid VHh (~25 kDa)

D-Domain (~8 kDa)

D-Domain Attributes:
Non-Antibody Derived Synthetic Protein[1,2]

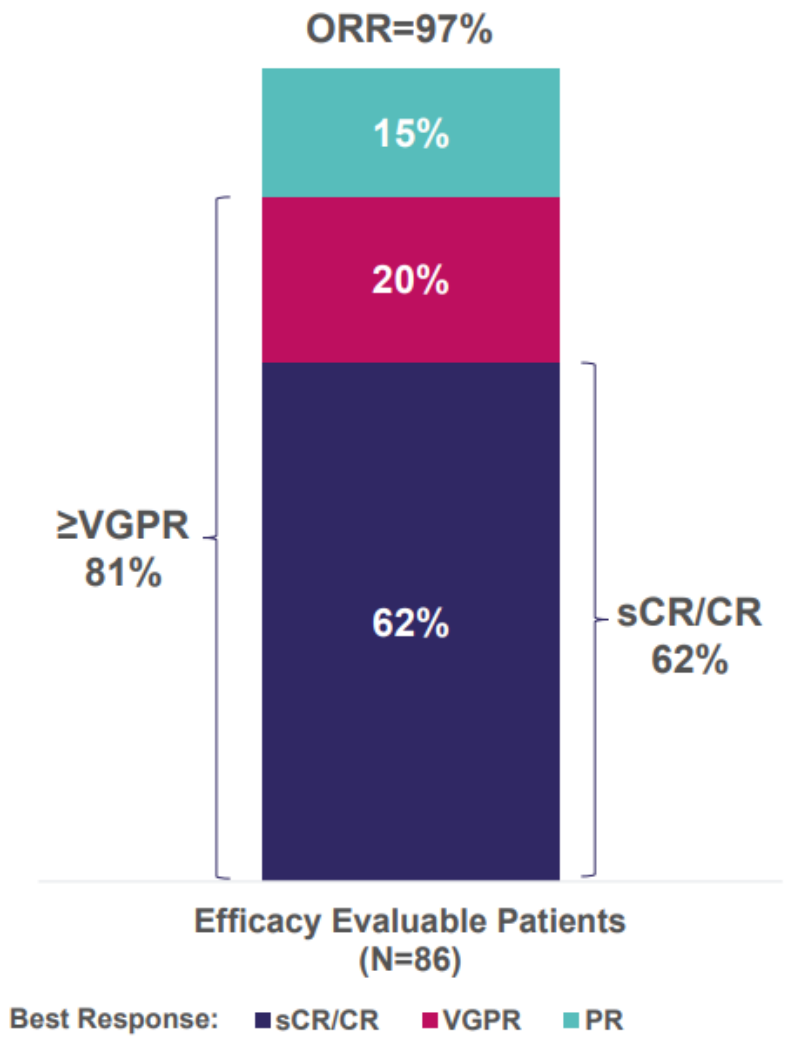
Size	**Small D-Domain construct facilitates high transduction efficiency, CAR positivity, and CAR density on the T-cell surface[2-4]**
Stability	**Rapid D-Domain folding, lack of disulfide bonds, and a hydrophobic core enables stability at and beyond physiologic conditions[5,6]**
Structure	**Due to small size and compact structure, D-Domain CARs have a low risk of tonic signaling[6] and potentially more efficient Multiple Myeloma cell killing**

1031 Phase 2 Registrational Study of Anitocabtagene Autoleucel for the Treatment of Patients with Relapsed and/or Refractory Multiple Myeloma: Preliminary Results from the IMMagine-1 Trial

Characteristics	Safety Evaluable (n=98)	Efficacy Evaluable (n=86)
Age (yrs), median (min - max)	65 (38 – 78)	65 (38 – 78)
Age ≥ 65	51 (52%)	47 (55%)
Age ≥ 70	30 (31%)	28 (33%)
Age ≥ 75	10 (10%)	10 (12%)
Gender (male / female)	55 (56%) / 43 (44%)	48 (56%) / 38 (44%)
Race		
White	79 (81%)	70 (81%)
Black / African American	9 (9%)	8 (9%)
Asian / Other	10 (10%)	8 (9%)
ECOG PS 0 / 1	45 (46%) / 53 (54%)	39 (45%) / 47 (55%)
Extramedullary disease[a]	16 (16%)	13 (15%)
High Risk Cytogenetics[b]	39 (40%)	33 (38%)
Refractory to last line of therapy	98 (100%)	86 (100%)
Triple refractory	85 (87%)	74 (86%)
Penta refractory	41 (42%)	37 (43%)
Prior Lines of Therapy, median (min - max)	4 (3 – 8)	4 (3 – 8)
3 Prior LoT	45 (46%)	37 (43%)
Time since diagnosis (yrs), median (min-max)	7.2 (1 – 23)	7.5 (1 – 23)
Prior ASCT	73 (75%)	64 (74%)
Bridging therapy	65 (66%)	61 (71%)
Outpatient administration	8 (8%)	5 (6%)

iMMagine-1: Overall Response Rate and MRD Negativity

Efficacy Evaluable Patients (N=86)



- At a median follow-up of 9.5 months, ORR was 97% and sCR/CR rate was 62%
- 93.1% (n=54/58) of evaluable patients were MRD negative at minimum of 10^{-5} sensitivity

	Evaluable Patients	Months (min - max)
Median time to first response	83	1.0 (0.9 - 7.3)
Median time to MRD negativity of $\leq 10^{-5}$	54	1.0 (0.9 - 6.4)

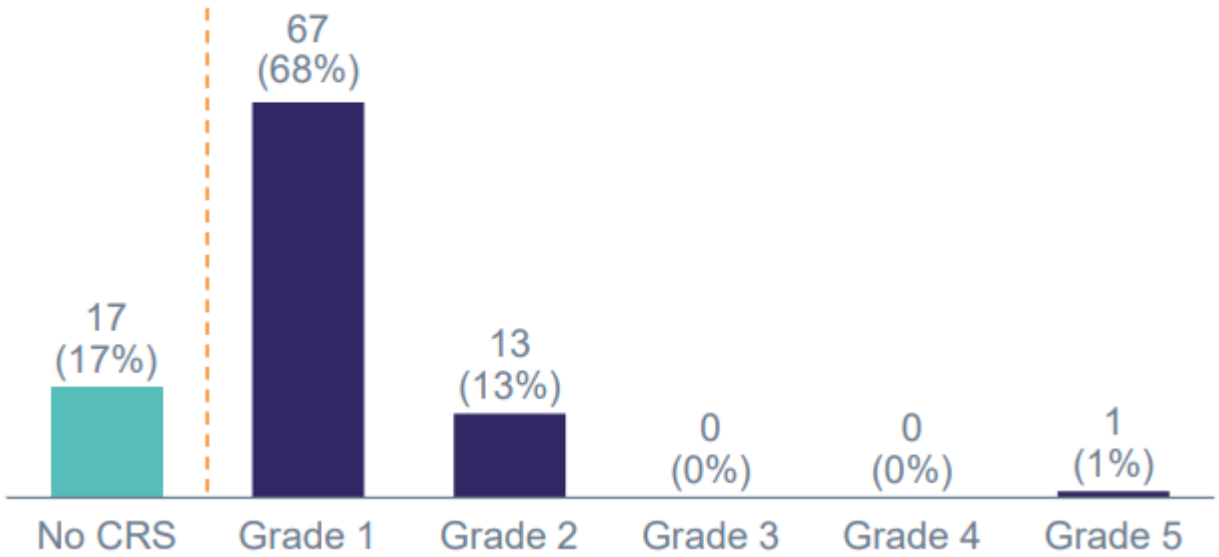
iMMagine-1: PFS and OS Rates Estimated by Kaplan-Meier

Efficacy Evaluable Patients (N=86)

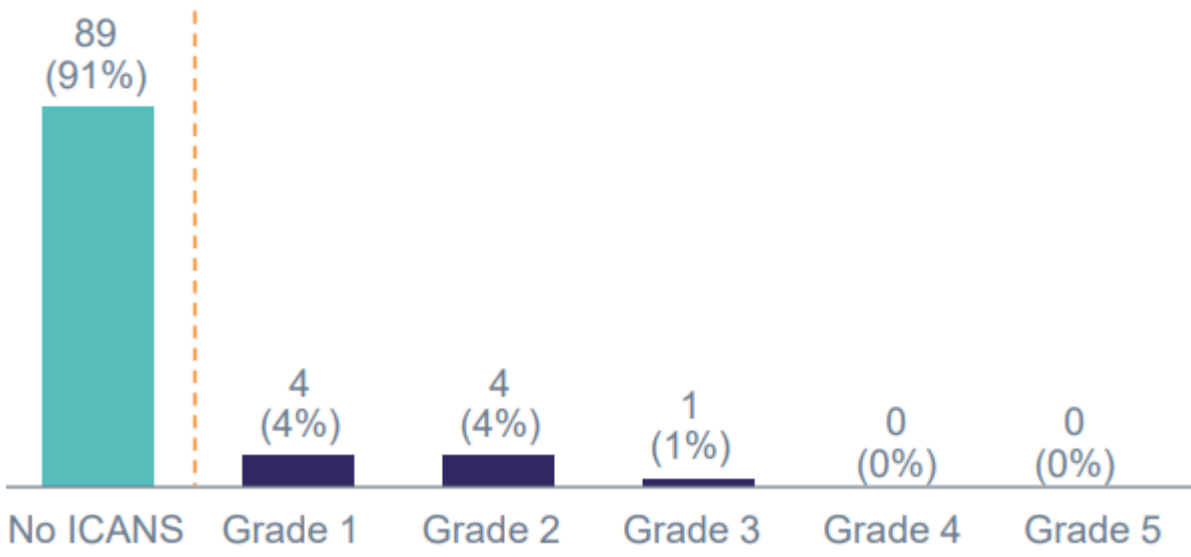
	PFS Rate (%) (95% CI)	OS Rate (%) (95% CI)
6-Month	93.3% (84.4%, 97.2%)	96.5% (89.6%, 98.9%)
12-Month	78.5% (63.5%, 87.9%)	96.5% (89.6%, 98.9%)

1031 Phase 2 Registrational Study of Anitocabtagene Autoleucel for the Treatment of Patients with Relapsed and/or Refractory Multiple Myeloma: Preliminary Results from the IMMagine-1 Trial

Maximum CRS Grade (N=98)



Maximum ICANS Grade (N=98)



Efficacy and safety with extended follow-up in a phase 1 study of arlocabtagene autoleucel (BMS-986393), a G protein–coupled receptor class C group 5 member D (GPRC5D)–targeted CAR T cell therapy, in patients with heavily pretreated relapsed/refractory multiple myeloma

Susan Bal,[1] Larry D Anderson, Jr,[2] Omar Nadeem,[3] Jesus G Berdeja,[4] Adriana C Rossi,[5] Tara Gregory,[6] Mehmet Hakan Koçoğlu,[7] Thomas G Martin,[8] Daniel N Egan,[9] Luciano J Costa,[1] Hongxiang Hu,[10] Jinjie Chen,[10] Chaoqun Mei,[10*] Naomey Sarkis,[10] Alok Shrestha,[10] Safiyyah Ziyad,[10] Wei-Ming Kao,[10] Allison J Kaeding,[10*] Michael R Burgess,[10] and Myo Htut[11]

[1]University of Alabama at Birmingham, Birmingham, AL, USA; [2]Hematologic Malignancies and Cellular Therapy Program, Simmons Comprehensive Cancer Center, UT Southwestern Medical Center, Dallas, TX, USA; [3]Dana-Farber Cancer Institute, Boston, MA, USA; [4]Sarah Cannon Research Institute at Tennessee Oncology, Nashville, TN, USA; [5]Icahn School of Medicine at Mount Sinai, New York, NY, USA; [6]Colorado Blood Cancer Institute, Sarah Cannon Cancer Network, Denver, CO, USA; [7]University of Maryland, Greenebaum Comprehensive Cancer Center, Baltimore, MD, USA; [8]University of California, San Francisco, San Francisco, CA, USA; [9]Swedish Cancer Institute, Seattle, WA, USA; [10]Bristol Myers Squibb, Princeton, NJ, USA; [11]City of Hope Comprehensive Cancer Center, Duarte, CA, USA

*At the time of the analysis.

Baseline characteristics suggest a difficult-to-treat patient population

	All treated patients (N = 84)	150 × 10^6 CAR T cells (n = 26)
Age, median (range), years	63 (39–80)	63 (39–74)
Male sex, n (%)	43 (51)	14 (54)
Primary race,[a] n (%)		
Native Hawaiian or other Pacific Islander	1 (1)	0
American Indian or Alaska Native	1 (1)	1 (4)
Asian	4 (5)	2 (8)
Black or African American	14 (17)	3 (12)
White	56 (67)	19 (73)
High-risk cytogenetics, n (%)		
del(17p), t(4;14), and/or t(14;16)	35 (42)	11 (42)
del(17p)	26 (31)	11 (42)
1q21 amp/gain	46 (55)	15 (58)
Extramedullary plasmacytoma, n (%)	39 (46)	9 (35)

	All treated patients (N = 84)	150 × 10^6 CAR T cells (n = 26)
Time since diagnosis, median (range), years	6.1 (0.7–17.1)	6.8 (1.3–11.5)
Median number of prior antimyeloma treatment regimens, (range)	5 (3–15)	5 (3–13)
Prior BCMA-targeted therapy, n (%)	41 (49)	12 (46)
Refractory status to prior therapies,[b] n (%)		
BCMA-targeted therapy	16 (20[e])	3 (13[e])
Triple class[c]	64 (76)	22 (85)
Penta drug[d]	29 (35)	12 (46)
Most recent antimyeloma treatment regimen	70 (83)	24 (92)

Data cutoff: August 23, 2024. [a]Unknown/missing for 8 patients. [b]Refractory definition: progression during or within 60 days of end of treatment or lack of response. [c]a PI, IMiD agent, and anti-CD38 antibody. [d]≥ 2 PIs, ≥ 2 IMiD therapies, and an anti-CD38 antibody. [e]Data are from the efficacy-evaluable population (n = 79 all dose levels; n = 23 with 150 × 10^6 CAR T cells). BCMA, B-cell maturation antigen; CAR, chimeric antigen receptor; IMiD, immunomodulatory imide drug; PI, proteasome inhibitor.

No new safety signals identified, and a low incidence of high-grade, non-hematological TEAEs

TEAE, n (%)	All treated patients (N = 84)		150 × 10^6 CAR T cells (n = 26)	
	Any grade	Grade 3/4	Any grade	Grade 3/4
Any TEAE	84 (100)	72 (86)	26 (100)	22 (85)
Hematological TEAEs (≥ 30% of all treated patients)				
Neutropenia	62 (74)	59 (70)	20 (77)	18 (69)
Anemia	42 (50)	27 (32)	13 (50)	11 (42)
Thrombocytopenia	39 (46)	24 (29)	10 (38)	5 (19)
Non-hematological TEAEs (≥ 30% of all treated patients[a])				
Infections	46 (55)	16 (19)	13 (50)	3 (12)
Hypokalemia	38 (45)	4 (5)	12 (46)	2 (8)
Hypocalcemia	29 (35)	2 (2)	7 (27)	0
Headache	31 (37)	1 (1)	9 (35)	0
Hypophosphatemia	28 (33)	2 (2)	11 (42)	1 (4)
Nausea	26 (31)	1 (1)	8 (31)	1 (4)
Fatigue	28 (33)	2 (2)	12 (46)	1 (4)
Dysgeusia	26 (31)	0	9 (35)	0
Diarrhea	25 (30)	1 (1)	10 (38)	1 (4)

- Hematological AEs were most common
- Low incidence of grade 3/4 infections

Data cutoff: August 23, 2024. [a]In addition, CRS (reported on the next slide) occurred in 82% of patients. AE, adverse event; CAR, chimeric antigen receptor; TEAE, treatment-emergent adverse event.

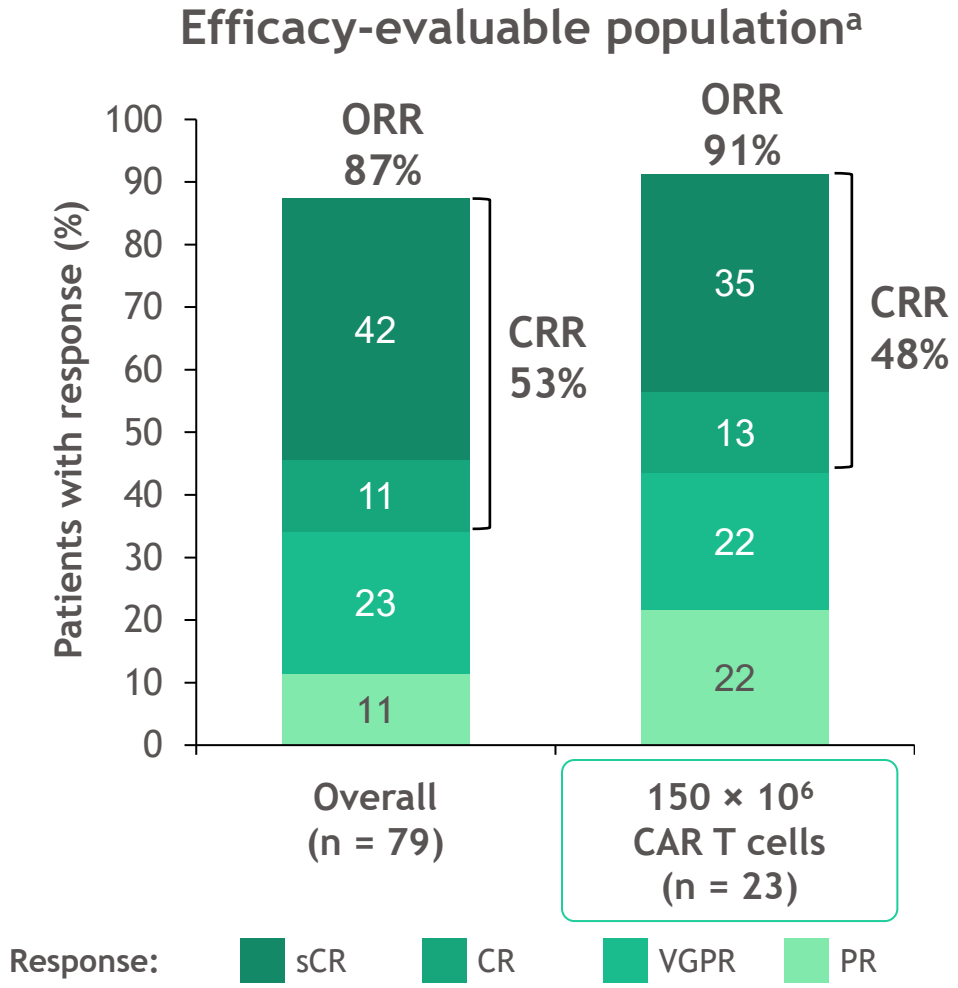
TRAEs were generally low grade

Select TRAEs	All treated patients (N = 84) Any grade	Grade 3/4
CRS, n (%)	69 (82)	3 (4)
ICANS, n (%)	8 (10)	2 (2)
Other select neurotoxicity,[a] n (%)	10 (12)	6 (7)
MAS/HLH, n (%)	0	3 (4)
On-target/off-tumor skin, nail, and/or oral event		
Skin		
Patients with an event, n (%)	25 (30)	0
Patients with resolved event(s), n (%)	22 (88)	
Median time to resolution[b]	26 days	
Nail		
Patients with an event, n (%)	16 (19)	0
Patients with resolved event(s), n (%)	12 (75)	
Median time to resolution[b]	98 days	
Oral, including dysgeusia and dysphagia		
Patients with an event, n (%)	27 (32)	0
Patients with resolved event(s), n (%)	19 (70)	
Median time to resolution[b]	66 days	

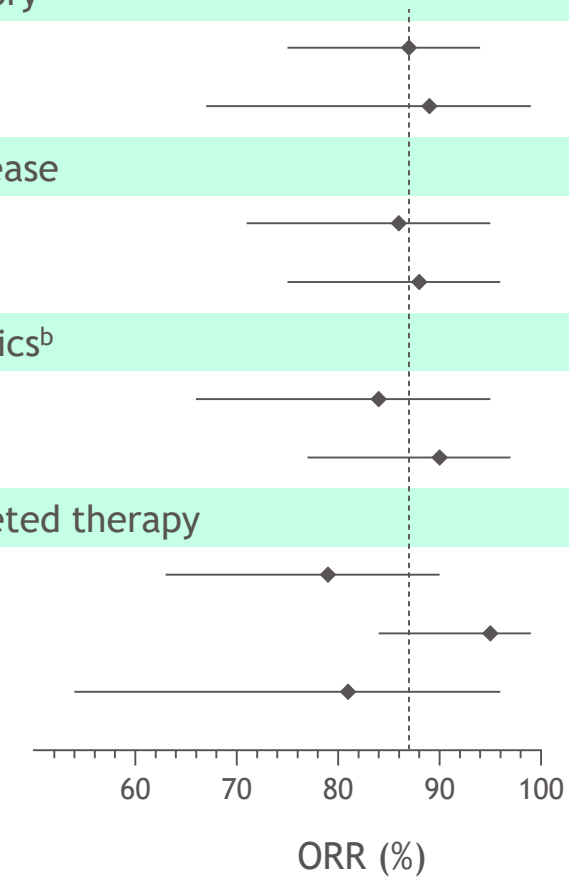
- CRS was predominantly grade 1 or 2
  - One patient had grade 5 CRS at the 450 × 10^6 DL
- Most patients with skin, nail, and/or oral on target off tumor toxicity did not require intervention (79%)
- Five patients experienced weight loss
- Other select neurotoxicity episodes occurred at the 150–450 × 10^6 DLs
  - Defined as dizziness, ataxia, neurotoxicity, dysarthria, and/or nystagmus
  - None were grade 4/5; median time to onset was 30.5 days
- No cases of parkinsonism, Guillain-Barré syndrome, or cranial nerve palsy

Data cutoff: August 23, 2024. [a]Preferred CTCAE terms of dizziness, ataxia, neurotoxicity, dysarthria, and/or nystagmus. [b]Calculated from all resolved episodes, including separately considering individual episodes that occurred in 1 patient. AE, adverse event; CRS, cytokine release syndrome; CTCAE, Common Terminology Criteria for Adverse Events; DL, dose level; HLH, hemophagocytic lymphohistiocytosis; MAS, macrophage activation syndrome; ICANS, immune effector cell-associated neurotoxicity syndrome; TRAE, treatment-related adverse event.

High response rates were observed in a difficult-to-treat patient population exposed to ≥ 3 prior treatment regimens



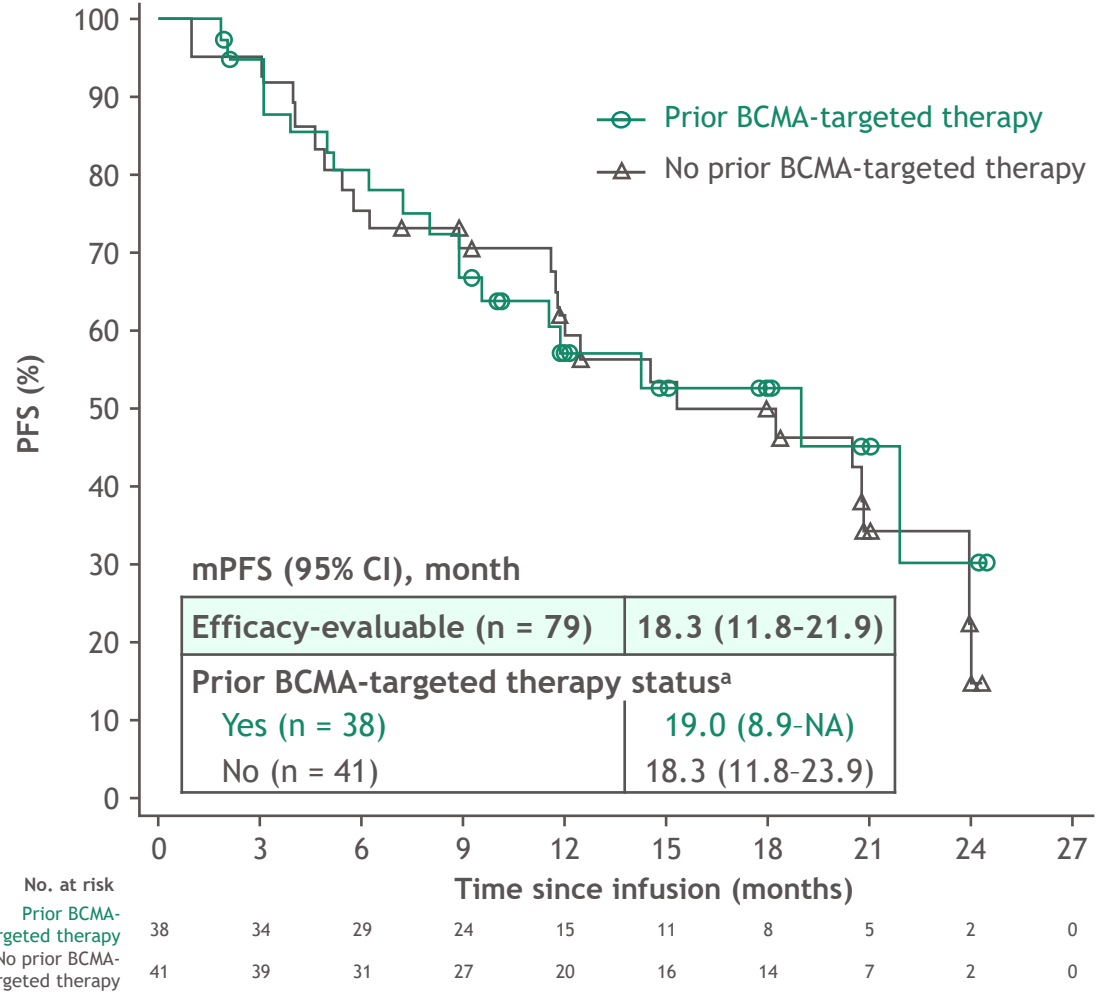
Disease characteristic	n/N	ORR (%) (95% CI)
Triple class-refractory		
Yes	52/60	87 (75-94)
No	17/19	89 (67-99)
Extramedullary disease		
Yes	31/36	86 (71-95)
No	38/43	88 (75-96)
High-risk cytogenetics[b]		
Yes	26/31	84 (66-95)
No	43/48	90 (77-97)
Previous BCMA-targeted therapy		
Yes	30/38	79 (63-90)
No	39/41	95 (84-99)
Yes; refractory	13/16	81 (54-96)



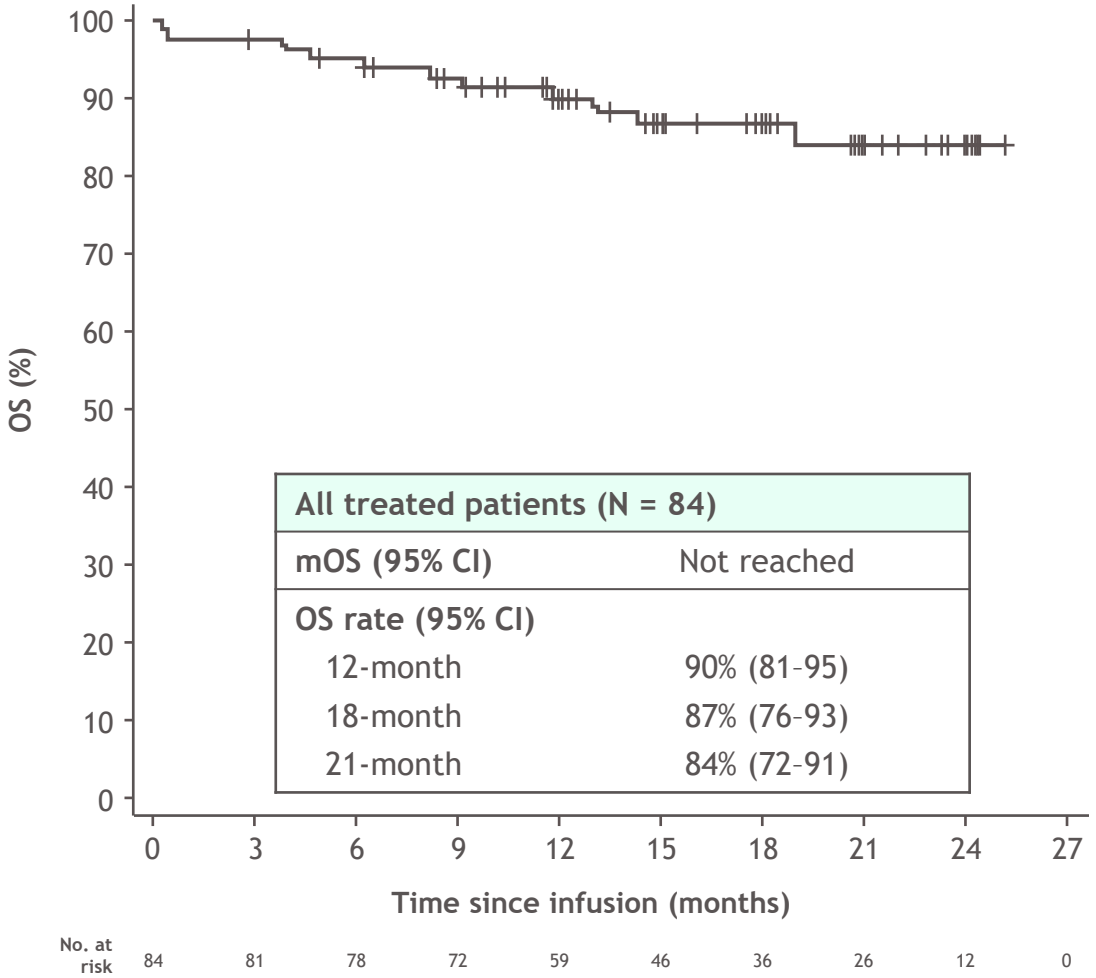
Data cutoff: August 23, 2024. [a]The efficacy-evaluable population includes all patients who received conforming arlo-cel, had measurable disease at the most recent disease assessment prior to arlo-cel infusion, had ≥ 1 post-infusion disease response assessment, and inclusion was irrespective to any possible response to bridging therapy. Five patients were not included in the efficacy-evaluable set; 2 died before the first post-infusion assessment, and 3 because their disease was no longer measurable after bridging therapy. [b]del(17p), t(4;14), and/or t(14;16). arlo-cel, arlocabtagene autoleucel; BCMA, B-cell maturation antigen; CAR, chimeric antigen receptor; CR, complete response; CRR, complete response rate; ORR, overall response rate; PR, partial response; sCR, stringent complete response; VGPR, very good partial response.

mPFS is prolonged and mOS is not reached in this heavily pretreated population

PFS[a,b]



OS



Data cutoff: August 23, 2024. PFS and OS were estimated by Kaplan-Meier methods. Symbols show censored patients. [a]The efficacy-evaluable population includes all 79 patients who received conforming arlo-cel, had measurable disease at the most recent disease assessment prior to arlo-cel infusion, had ≥ 1 post-infusion disease response assessment, and inclusion was irrespective to any possible response to bridging therapy. Five patients were not included in the efficacy-evaluable set; 2 died before the first post-infusion assessment, and 3 because their disease was no longer measurable after bridging therapy. [b]mPFS in all treated patients was 15.3 months (95% CI 11.8-20.8). arlo-cel, arlocabtagene autoleucel; BCMA, B-cell maturation antigen; m, median; NA, not applicable; OS, overall survival; PFS, progression-free survival.

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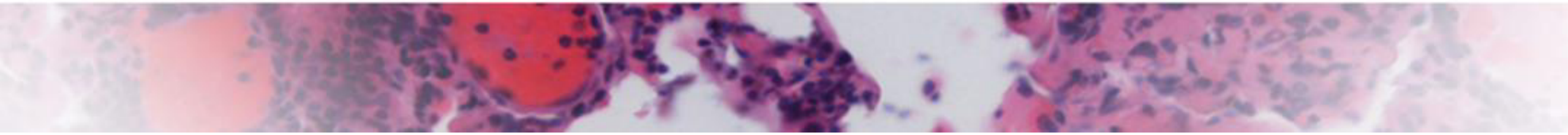

Efficacy of HBI0101, an Anti-BCMA Chimeric Antigen Receptor T-cell (CART) for Relapsed/Refractory Multiple Myeloma

Eyal Lebel[1,2], Nathalie Asherie[1,2]*, Shlomit Kfir-Erenfeld[1,2]*, Shlomo Elias, MD, PhD[1,2], Sigal Grisariu, MD[1,2]*, Batia Avni, MD[1,2], Miri Assayag[1,2], Tali Dubnikov-Sharon[2], Rivka Alexander-Shani[2], Nomi Bessig[2], Alaa Shehadeh[2], Aseel Ishtay[2], Shelly Pimienta[2], Vladimir Vaistein[1,3], Eran Zimran[1,2], Marjorie Pick[1,3], Yael C. Cohen[4,5], Irit Avivi[4,5], Cyrille Cohen[6], Polina Stepensky[1,2] †, Moshe E Gatt[1,3] †*

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Treatment

Phase 1a-

Cohort 1 (6 pts, $150x10^6$ CART cells)

Cohort 2 (7 pts, $450x10^6$ CART cells)

Cohort 3 (7 pts, $800x10^6$ CART cells)

Phase 1b-

89 pts, $800x10^6$ CART cells)

96 patients

From 12-Sep-2021- to data cut-off 26-Sep-2024:

118 pts were enrolled

111 pts were collected

100 pts were infused

96 pts completed day +30 response evaluation

Lymphodepletion- FLU/CY- 92 pts,

Bendamustine- 4 pts (CRCL<20ml/min)

Manufacturing success-100%

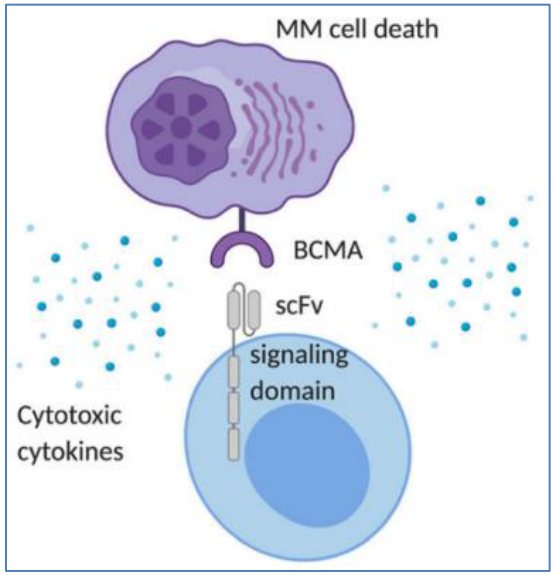
Optimal planned dose- 95%

First 57 pts- fresh product

Next 39 pts- cryopreserved

Methods- Inclusion criteria

- R/R MM after 3 prior lines, including PI, IMiD, anti-CD38 antibody
- Permissive inclusion criteria:
  - PLT ≥ $30x10^9$/l
  - CRCL ≥ 20ml/min
  - ECOG-PS ≤ 2
  - EF ≥ 40%
  - Non-secretory MM allowed

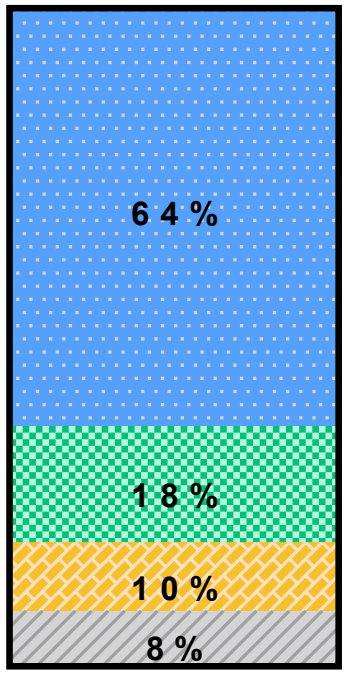


Results – patient characteristics

Age	median 64.5 years (35-84)			
Sex	Females- 51, Males- 45			
R-ISS	**1:** 24	**2:** 48	**3:** 21	Missing- 3
High risk FISH – t(4:14)/t(14:16)/17p-	41/93 (44%)			
High risk FISH including 1q gain	72/93 (77%)			
EMD	24/96 (25%)			
Prior lines of therapy	median 4 (3-13)			
Triple refractory	82/96 (85%)			
Penta-refractory	33/96 (34%)			
Anti-BCMA exposed / refractory	19/96 (20%) / 17/96 (18%)			
Not eligible for KARMMA & CARTITUDE 1	47/96 (49%)			

Responses

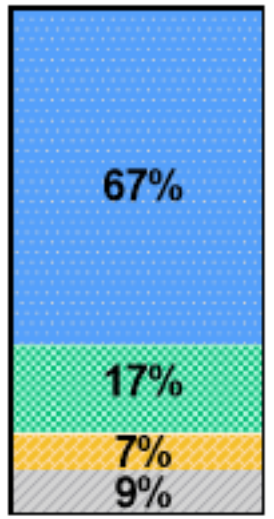
ORR=92%
MRDneg=74%



Total=96

Fresh CART

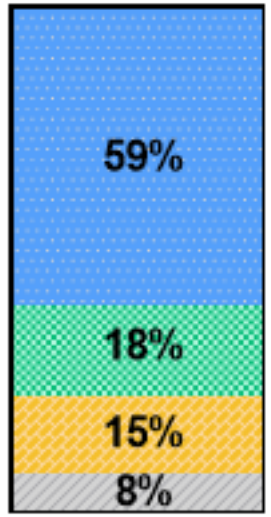
ORR=91%
MRDneg=74%



Total=57

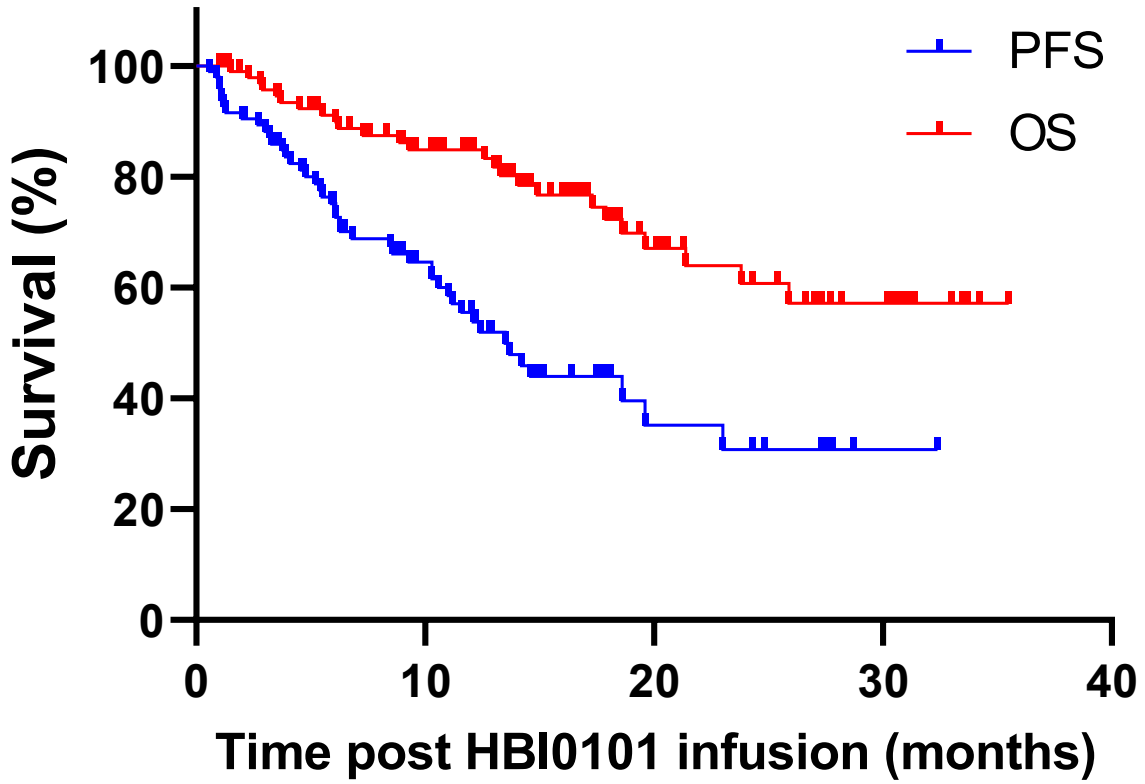
Frozen CART

ORR=92%
MRDneg=74%



Total=39

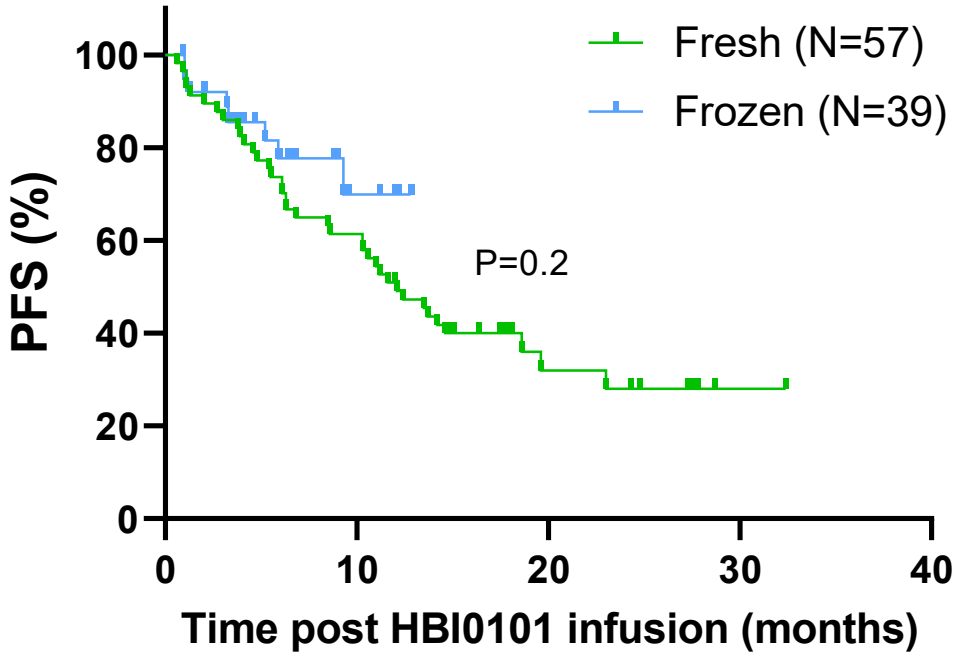
Survival

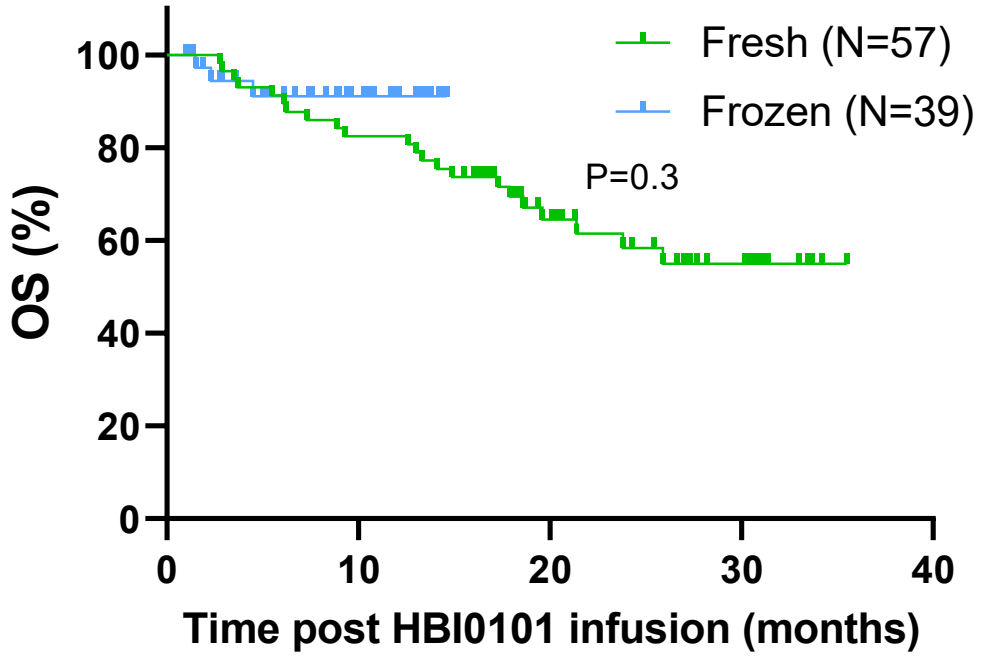


Median follow-up 14.7m

Median PFS = **13.5 months** (95% CI: 10.3-19.6)
Median OS = **NR** (95% CI: 21.4 months-NR)

Survival- fresh vs. frozen





Safety

Hematological toxicity

	Grade 3/4	Persistent G≥3 after day +28
Anemia	66%	0%
Thrombocytopenia	43%	8%
Neutropenia	99%	4%

Median follow-up 14.7m

Infections and other AEs

IgG < 400mg/dl	77%
IVIG replacement	44%
Infections	53%
Grade ≥3 infections	13%
Other grade≥3 AE	12%
New cancers	5 (5%) Lung, thyroid, bladder, Bile ducts, skin

Safety- CRS, ICANS, deaths

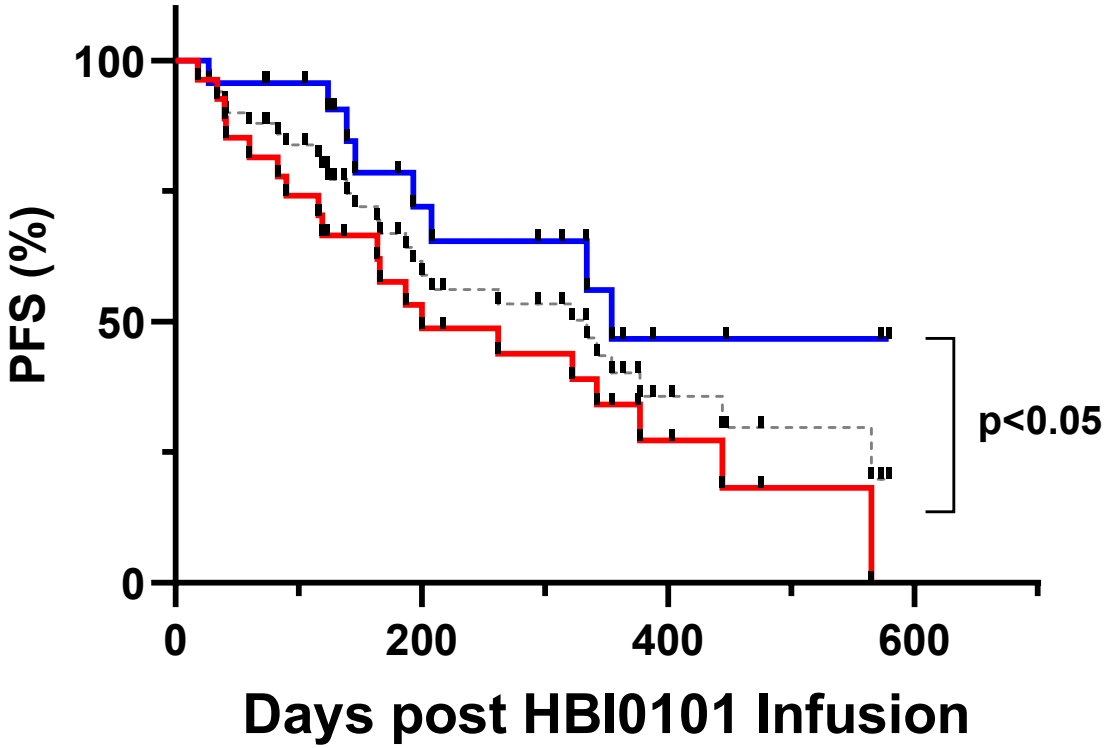
CRS	**Grade 1-2**	76 (79%)
	Grade 3	15 (16%)
	Grade 4	0 (0%)
	Grade 5	0 (0%)
	Total cases	91 (95%)
Tocilizumab for CRS		82/91 (90%)
Steroid for CRS		19/91 (21%)
ICANS	**Grade 1-2**	4 (4%)
	Grade ≥3	0 (0%)
Other neurological AEs		0 (0%)
Treatment related deaths		0 (0%)

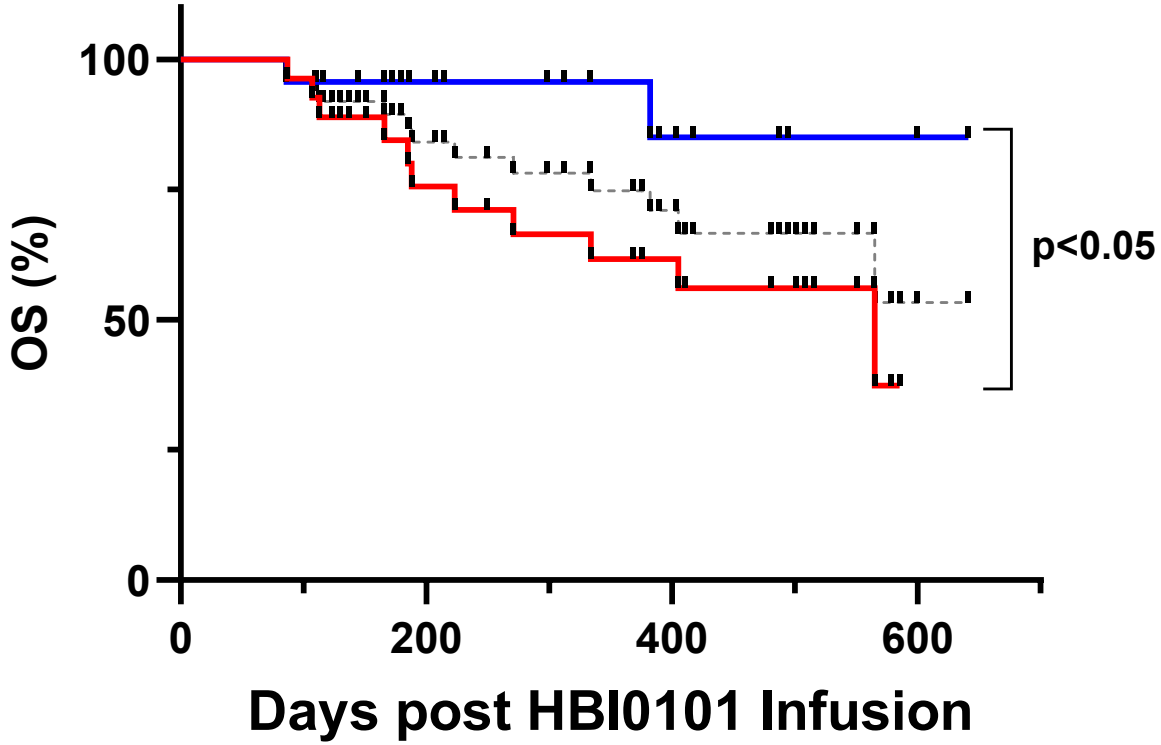
Prognostic factors

HBI0101 – whole cohort

KarMMa / CARTITUDE-1 eligible

KarMMa & CARTITUDE-1 non-eligible





HBI0101 in AL amyloidosis

- Heavily pre-treated, refractory AL, including severe cardiac disease

- Manageable toxicity.
  no G4/5 CRS, no ICANS, no TRM

- ORR 94%, CR 75%, MRD negativity 64%, organ responses 62%