Exhibit 99.1

ARCELLX

Investor Relations Event at the 66th ASH Annual Meeting

December 9, 2024

Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended, that are based on our management's beliefs and assumptions and on information currently available to our management. All statements other than statements of historical facts contained in this presentation, including, but not limited to, the following are forward-looking statements: statements regarding the attributes of the D-Domain and its potential benefits; the safety and efficacy profiles of anito-cel, its potential to be best-in-class, the speed, reliability and scalability of its manufacturing, the ability of patients to access anito-cel, and growth opportunities for anito-cel; enrollment in the iMMagine-3 study; our future financial condition, results, strategy, operations and prospects; plans and timelines for the preclinical and clinical development of our product candidates, including the therapeutic potential, clinical benefits and safety profiles; expectations regarding timing, success and data announcements of our preclinical studies and clinical trials, the initiation, timing, progress and results of our current and future preclinical studies and clinical trials; our plans to develop and commercialize our current and future product candidates, alone or with other parties; the plans and objectives of management; and the industry size and trends and market opportunities. In some cases, you can identify forward-looking statements by terminology such as "assume," "believe," "can," "contemplate," "continue," "could," "design," "estimate," "expect," "imagine," "intend," "likely," "may," "might," "objective," "ongoing," "plan," "potential," "predict," "project," "seek" "should," "target," "will" or "would," or the negative of these terms or other similar expressions or other comparable terminology are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy and financial needs, and these statements represent our views as of the date of this presentation. We may not actually achieve the plans, intentions or expectations disclosed in these forward-looking statements, and you should not place undue reliance on these forward-looking statements.

Forward-looking statements are inherently subject to risks and uncertainties, including those set forth in Part II, Item 1A (Risk Factors) in the Quarterly Report on Form 10-Q for the quarter ended September 30, 2024, filed with the Securities and Exchange Commission (SEC) on November 7, 2024, and the other documents that we may file from time to time with the SEC. New risk factors emerge from time to time and it is no possible for our management team to predict all risk factors or assess the impact of all factors on the business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward-looking statements. While we may elect to update these forward-looking statements at some point in the future, we specifically disclaim any obligation to do so. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date of this presentation. As a result of these risks and others, including those set forth in our filings with the Securities and Exchange Commission (SEC), actual results could vary significantly from those anticipated in this presentation, and our financial condition and results of operations could be materially adversely affected.

This presentation discusses product candidates that are under preclinical or clinical evaluation and that have not yet been approved for marketing by the U.S. Food and Drug Administration or any other regulatory authority. No representation is made as to the safety or effectiveness of these product candidates for the use for which such product candidates are being studied. The presentation also includes select interim and preliminary results from an ongoing clinical trial as of specific data cutoff dates. Such results should be viewed with caution as final results may differ as additional data becomes available. Until finalized in a clinical study report, clinical trial data presented herein remain subject to adjustment as a result of clinical site audits and other review processes. Cross-trial comparisons are not based on head-to-head studies and no direct comparisons can be made. Cross-trial data interpretation should be considered with caution as it is limited by differences in study population, design and other factors.

This presentation also contains estimates and other statistical data made by independent parties or publicly available information, as well as other information based on our internal sources. These data involve a number of assumptions and limitations, and we have not independently verified the accuracy or completeness of the data contained in these industry publications and other publicly available information. Accordingly, we make no representations as to the accuracy or completeness of that data.

Agenda

Opening Remarks 10 min

Rami Elghandour
Chairman and Chief Executive Officer, Arcellx

iMMagine-1 Oral Presentation 20 min

Ciara L. Freeman M.D., Ph.D
iMMagine-1 Clinical Study Investigator

Physician Panel Discussion 30 min

Q&A 30 min

Anitocabtagene Autoleucel (anito-cel/CART-ddBCMA)
Autologous BCMA-directed CAR T-cell therapy using a novel, D-Domain binder[1,2]

scFv
(~25 kDa)

Bivalent camelid VHH
(~30 kDa)

D-Domain
(~8 kDa)

Anito-cel attributes from novel D-Domain	
Low total cell dose	Small D-Domain construct facilitates high transduction efficiency and CAR positivity, which permit a low total cell dose
Lack of tonic signaling	Rapid folding, lack of disulfide bonds, and a hydrophobic core enables D-Domain stability and lack of tonic signaling[5,6]
Optimal tumor cell killing	The D-Domain has a fast off-rate[4] and high CAR surface expression.[3,4] This combination may allow optimal tumor cell killing without prolonged inflammation

BCMA is B-cell Maturation Agent; CAR T is Chimeric Antigen Receptor T cell

[1]Rotte, et al. Immuno-Oncology Insights 2022; 3(1), 13–24; [2]Frigault, et al. Blood Adv. 2023; 7(5):768-777; [3]Cante-Barrett, et al. BMC Res. Notes 2016; 9:13; [4]Buonato, et al. Mol. Cancer Ther. 2022; 21(7):1171-1183; [5]Zhu, et al. Proc. Nat. Acad. Sci. 2003; 100(26): 15486-15491; [6]Qin, et al. Mol. Ther. 2019; 27(7): 1262-1274

Anito-cel: The BCMA CAR T Without Compromise

Potential Best-in-Class Efficacy Profile

- Phase 1 **median PFS of 30.2 months**

- **iMMagine-1 pivotal trial consistent with Phase 1 findings,** with comparable ORR, CRR, MRD-, and 6- and 12-mo PFS and OS %

- **Similar efficacy profile,** with comparable depth and durability of responses **observed across high-risk subgroups**

Differentiated Safety Profile with No Delayed Neurotoxicity

- **Zero cases of delayed neurotoxicity or other non-ICANS neurotoxicity** seen in >150 patients treated with anito-cel to date

- iMMagine-1 had highest rates of **≤ Grade 1 CRS (86%) and no ICANS (91%)** out of all BCMA CAR T pivotal trials

- **Favorable safety profile can get patients home sooner**, expanding capacity at hospitals, and lowering resource utilization / cost of care
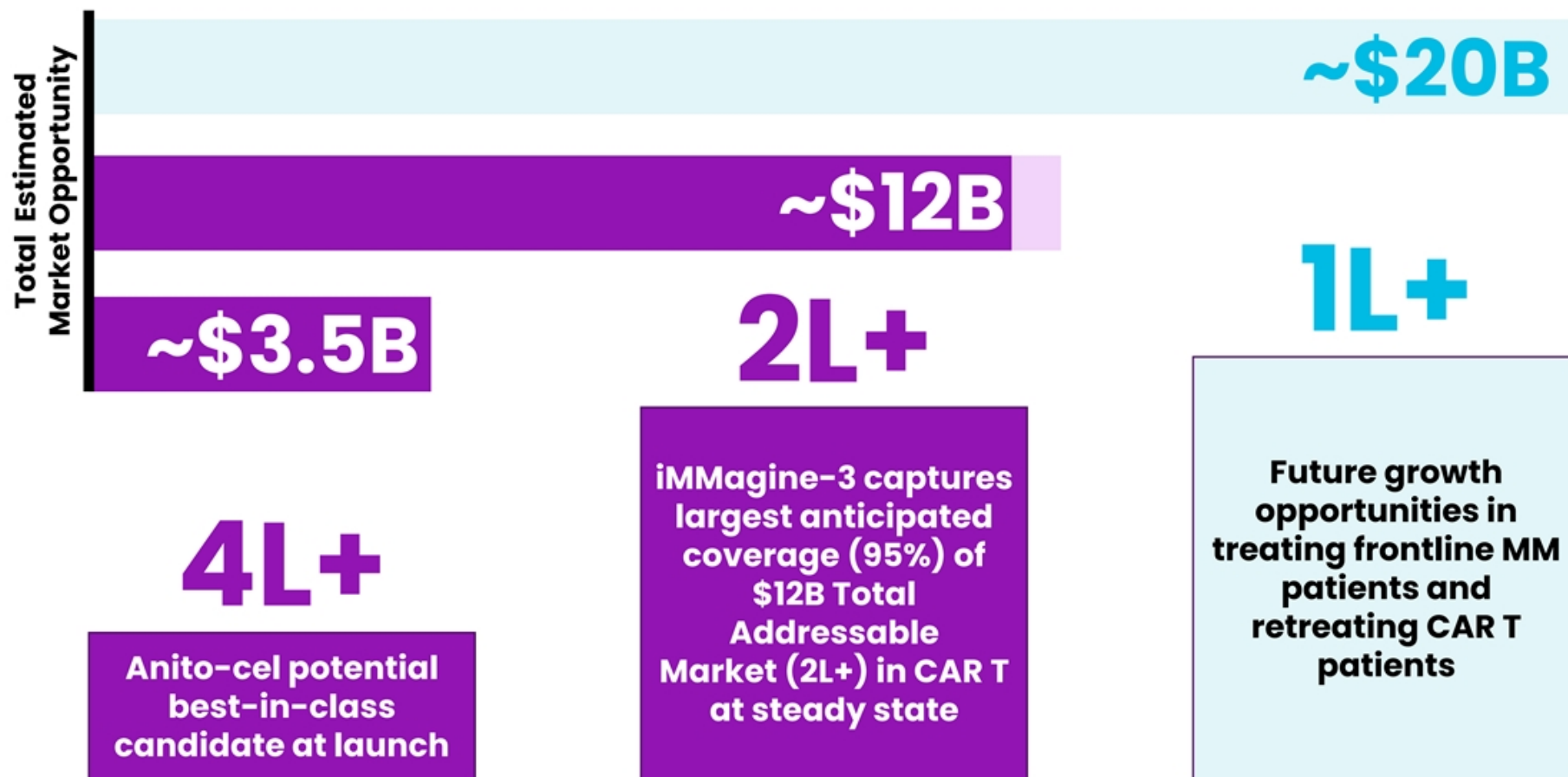
Rapid and Reliable Manufacturing

- **<17-day turnaround time[1]** for patients treated in iMMagine-3, in line with other Kite commercial CAR Ts

- **96% commercial manufacturing success rate** with **>25,000 patients treated[1]** from Kite's global CAR T infrastructure

- Expansive market presence with **500+ ATCs globally[1]** will provide unparalleled access to anito-cel

ORR is Overall Response Rate; CRR is Complete Response Rate; MRD is Minimum Residual Disease; PFS is Progression Free Survival; OS is Overall Survival; ICANS is Immune Effector Cell-associated Neurotoxicity Syndrome, CRS is Cytokine Release Syndrome; [1]Kite Data
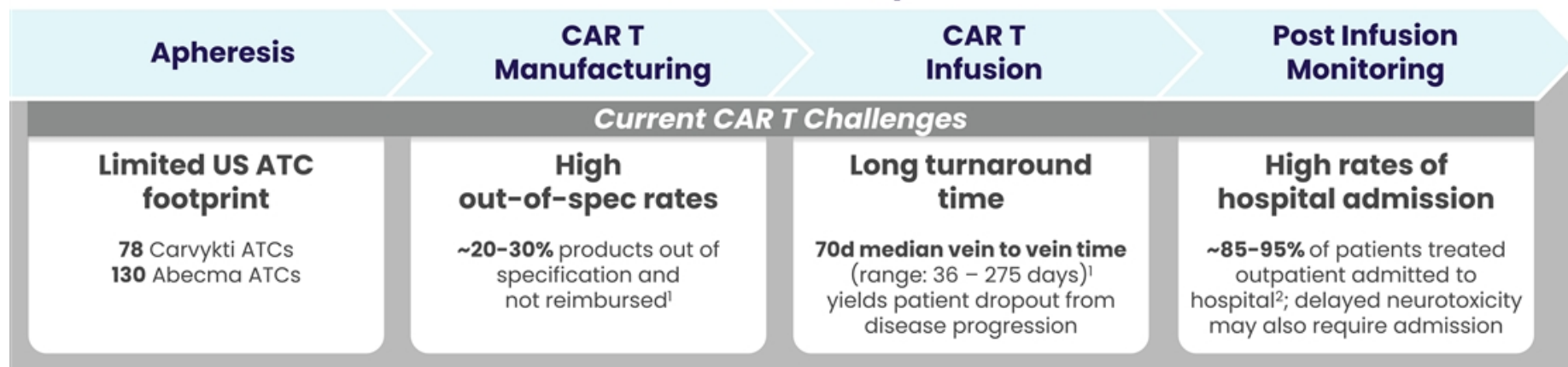
Multiple Myeloma is a Large Global Market Opportunity for CAR T

Total Estimated Market Opportunity

~$20B
1L+

~$12B
2L+

~$3.5B
4L+

Anito-cel potential best-in-class candidate at launch

iMMagine-3 captures largest anticipated coverage (95%) of $12B Total Addressable Market (2L+) in CAR T at steady state

Future growth opportunities in treating frontline MM patients and retreating CAR T patients

Note: Based on internal projections and estimates of 2024 MM Incidence, which management believes are reasonable and accurate, key assumptions include: 2L+ steady-state figures in US, EU7, Canada, Australia, and Japan and 75% anti-CD38 utilization in frontline by 2028E

Anito-cel Facilitates Current MM CAR T Adoption Drivers

CAR T Journey

Apheresis	CAR T Manufacturing	CAR T Infusion	Post Infusion Monitoring

Current CAR T Challenges

Limited US ATC footprint	**High out-of-spec rates**	**Long turnaround time**	**High rates of hospital admission**
78 Carvykti ATCs **130** Abecma ATCs	**~20-30%** products out of specification and not reimbursed[1]	**70d** median vein to vein time (range: 36 – 275 days)[1] yields patient dropout from disease progression	**~85-95%** of patients treated outpatient admitted to hospital[2]; delayed neurotoxicity may also require admission

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Anito-cel: The BCMA CAR T without compromise

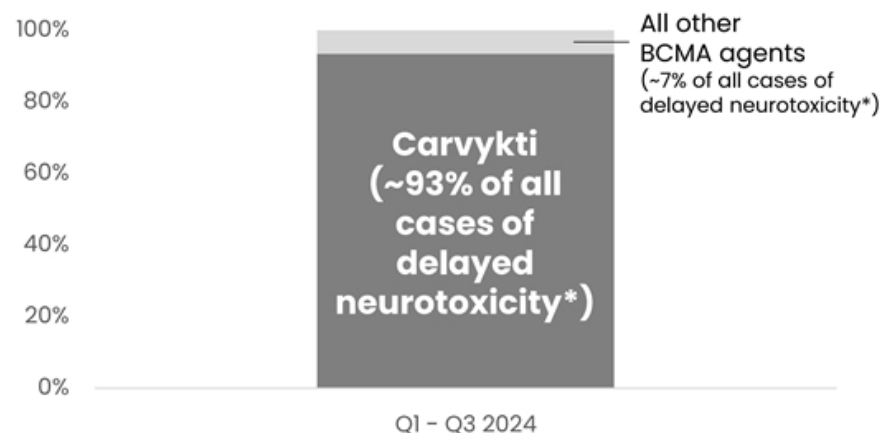| **Accessibility** >150 Kite US ATCs[3]	**Consistency** ≥96% Mfg Success Rate[3]	**Reliability** ≤17-day turnaround[3]	**Differentiated Safety** 0 delayed neurotox 86% ≤ Grade 1 CRS

Anito-cel Can Significantly Expand CAR T Access for MM Patients

Anito-cel CRS median time to onset ~4 days and median duration ~3 days, potentially limiting time in hospital and driving outpatient treatment

Anito-cel has seen 0 cases of Parkinsonism, Guillain-Barré syndrome, or cranial nerve palsies, potentially driving patient volume in earlier lines of therapy

Left chart:
- iMM-1 No CRS: 17%
- iMM-1 Gr ≤ 1 CRS: 86%

~92% of iMM-1 patients had no CRS symptoms 10 days from infusion

Right chart (Q1 – Q3 2024):
- Carvykti (~93% of all cases of delayed neurotoxicity*)
- All other BCMA agents (~7% of all cases of delayed neurotoxicity*)

Anito-cel has seen 0 cases of delayed or non-ICANS neurotoxicity to date

>80% of CAR T cases have favorable reimbursement through case rate agreements or ASP+

*FDA FAERS Database Query was "CRANIAL NERVE PARALYSIS", "CRANIAL NERVE PALSIES MULTIPLE", "GUILLAIN-BARRE SYNDROME", "PARKINSONISM" Komodo claims analysis from 3/1/2022-3/1/2023; Freeman et al., Oral Presentation, ASH (Dec 2024); FDA FAERS Database
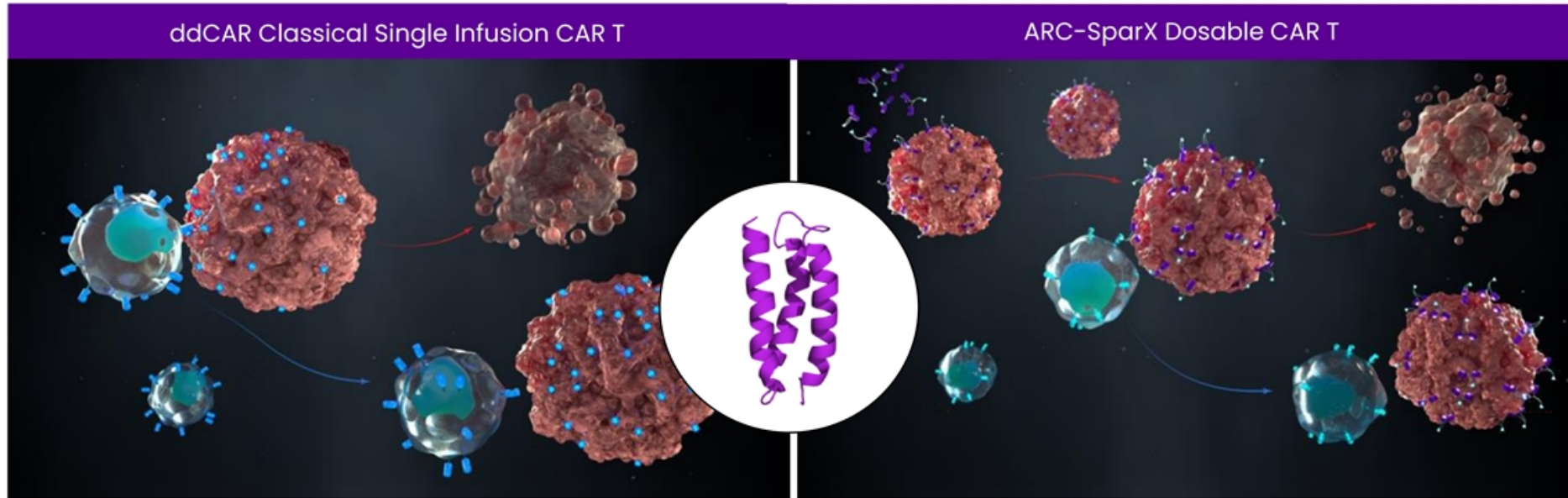
iMMagine-3 Global Phase 3 Trial with Kite Manufacturing, Currently Enrolling

Multi-center, Global, Phase 3 Randomized Controlled Clinical Trial (RCT) for anti-CD38 mAb and IMiD exposed patients

▸ Largest percentage of second line (2L) patients as anti-CD38 mAbs become standard of care in front line (1L)

▸ Anticipate high physician interest in iMMagine-3 based on:
   - Potential best-in-class product profile
   - Relevant standard of care alternatives
   - Rapid and reliable turnaround time with Kite manufacturing

▸ Easy to identify patient population, expected to streamline access to anito-cel post approval

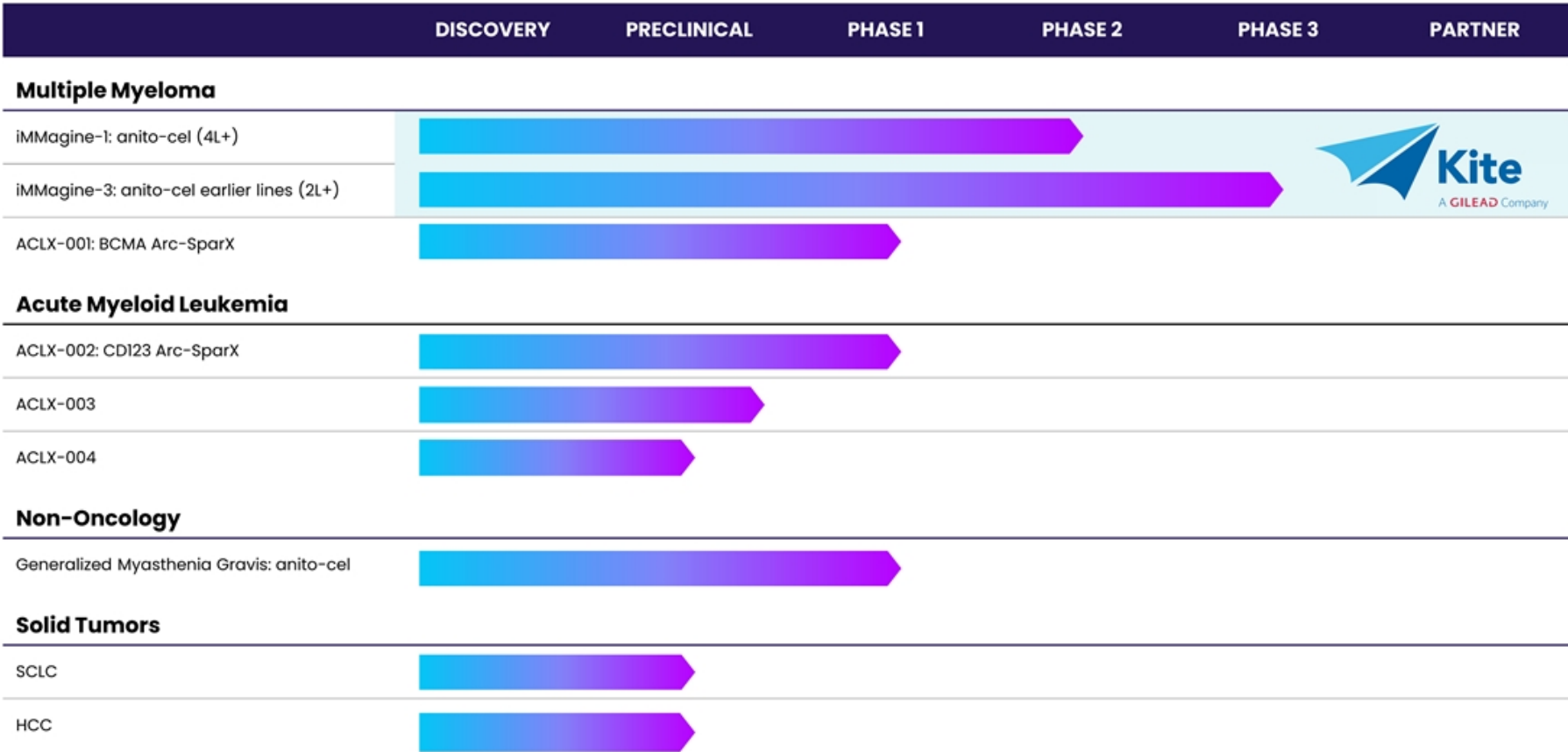▸ Confirmatory RCT will include ~450 adult patients randomized 1:1 in US and Intl sites

mAbs is monoclonal antibodies; IMiD is Immunomodulatory drugs

D-Domain Technology: Expansive Platform

| ddCAR Classical Single Infusion CAR T | ARC-SparX Dosable CAR T |

- ▸ Ability to leverage autologous or allogeneic strategies

- ▸ Therapeutic potential across liquid and solid tumors as well as non-oncology indications

A Rich Development Pipeline with Growth in Mind

	DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	PARTNER
Multiple Myeloma						
iMMagine-1: anito-cel (4L+)				●		Kite A GILEAD Company
iMMagine-3: anito-cel earlier lines (2L+)					●	Kite A GILEAD Company
ACLX-001: BCMA Arc-SparX		●				
Acute Myeloid Leukemia						
ACLX-002: CD123 Arc-SparX		●				
ACLX-003		●				
ACLX-004	●					
Non-Oncology						
Generalized Myasthenia Gravis: anito-cel		●				
Solid Tumors						
SCLC	●					
HCC	●					

Agenda

Opening Remarks 10 min

Rami Elghandour
Chairman and Chief Executive Officer, Arcellx

iMMagine-1 Oral Presentation 20 min
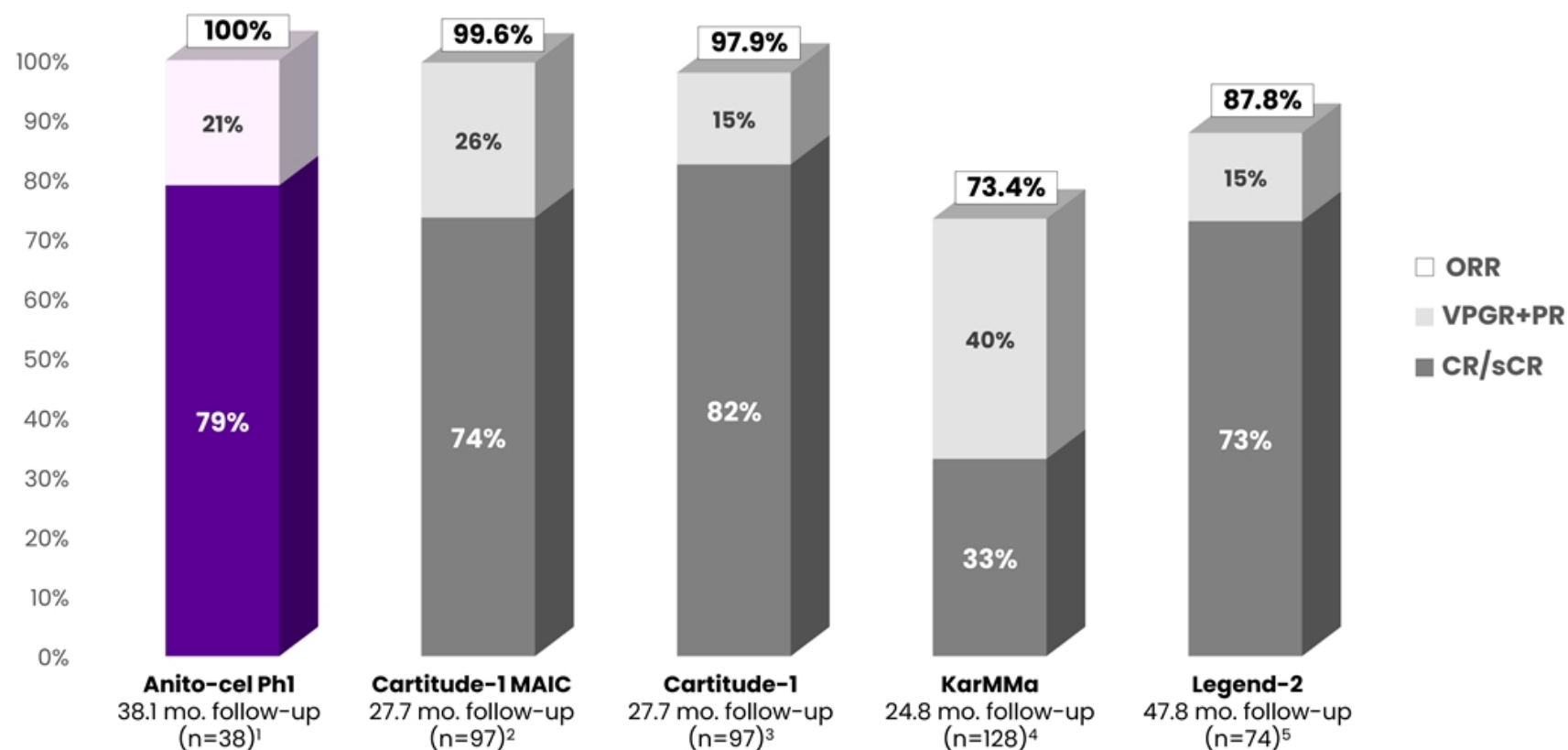
Ciara L. Freeman M.D., Ph.D
iMMagine-1 Clinical Study Investigator

Physician Panel Discussion 30 min

Q&A 30 min

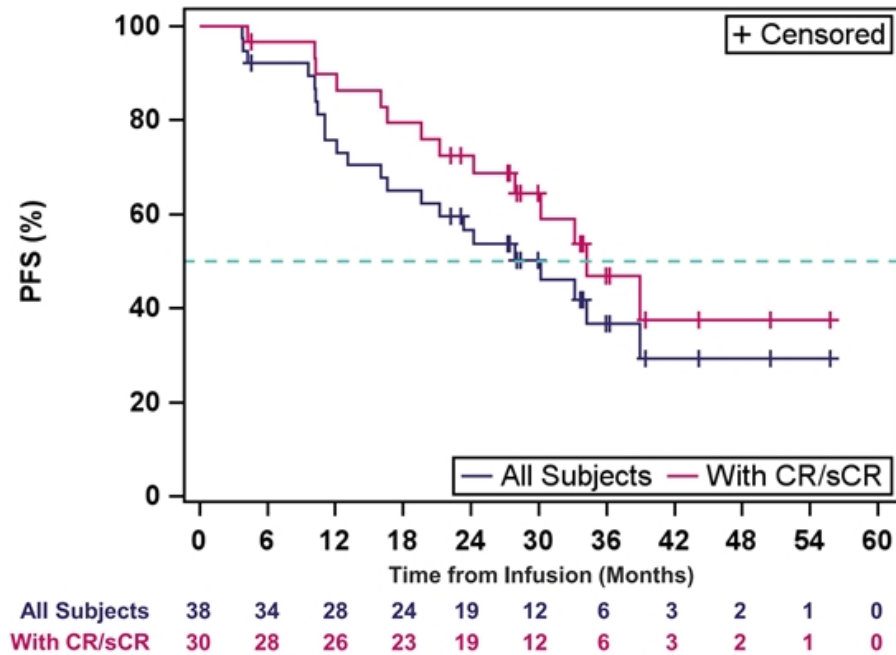# Anito-cel Phase 1: 100% Overall Response and 79% Complete Response

Legend:
- ☐ ORR
- ▨ VPGR+PR
- ▨ CR/sCR

Anito-cel Ph1 — 100% ORR; 21% VPGR+PR; 79% CR/sCR
38.1 mo. follow-up (n=38)[1]

Cartitude-1 MAIC — 99.6% ORR; 26% VPGR+PR; 74% CR/sCR
27.7 mo. follow-up (n=97)[2]

Cartitude-1 — 97.9% ORR; 15% VPGR+PR; 82% CR/sCR
27.7 mo. follow-up (n=97)[3]

KarMMa — 73.4% ORR; 40% VPGR+PR; 33% CR/sCR
24.8 mo. follow-up (n=128)[4]

Legend-2 — 87.8% ORR; 15% VPGR+PR; 73% CR/sCR
47.8 mo. follow-up (n=74)[5]

Anito-cel Phase 1: Median PFS is 30.2 Months

	Anito-cel Phase 1 Median Follow-up 38.1 months Minimum Follow-up 25.0 months		
	Time (months)	PFS Estimate (%)	95% Confidence Interval (%)
All Subjects (n=38)	6	92.1	(77.5, 97.4)
	12	75.9	(58.7, 86.6)
	18	65.0	(47.5, 78.0)
	24	56.6	(39.2, 70.8)
	30	50.3	(33.0, 65.3)

Note: Data cut-off October 3, 2024
Bishop et al, American Society of Hematology 2024, Poster 4825

Anito-cel iMMagine-1: Phase 2 Study Design

Key Eligibility Criteria

- Prior IMiD, PI, and CD38-targeted therapy
- Received ≥3 prior lines of therapy
- Refractory to the last line of therapy
- ECOG PS of 0 or 1
- Evidence of measurable disease

Target Dose of 115 x 10^6 CAR+ T cells
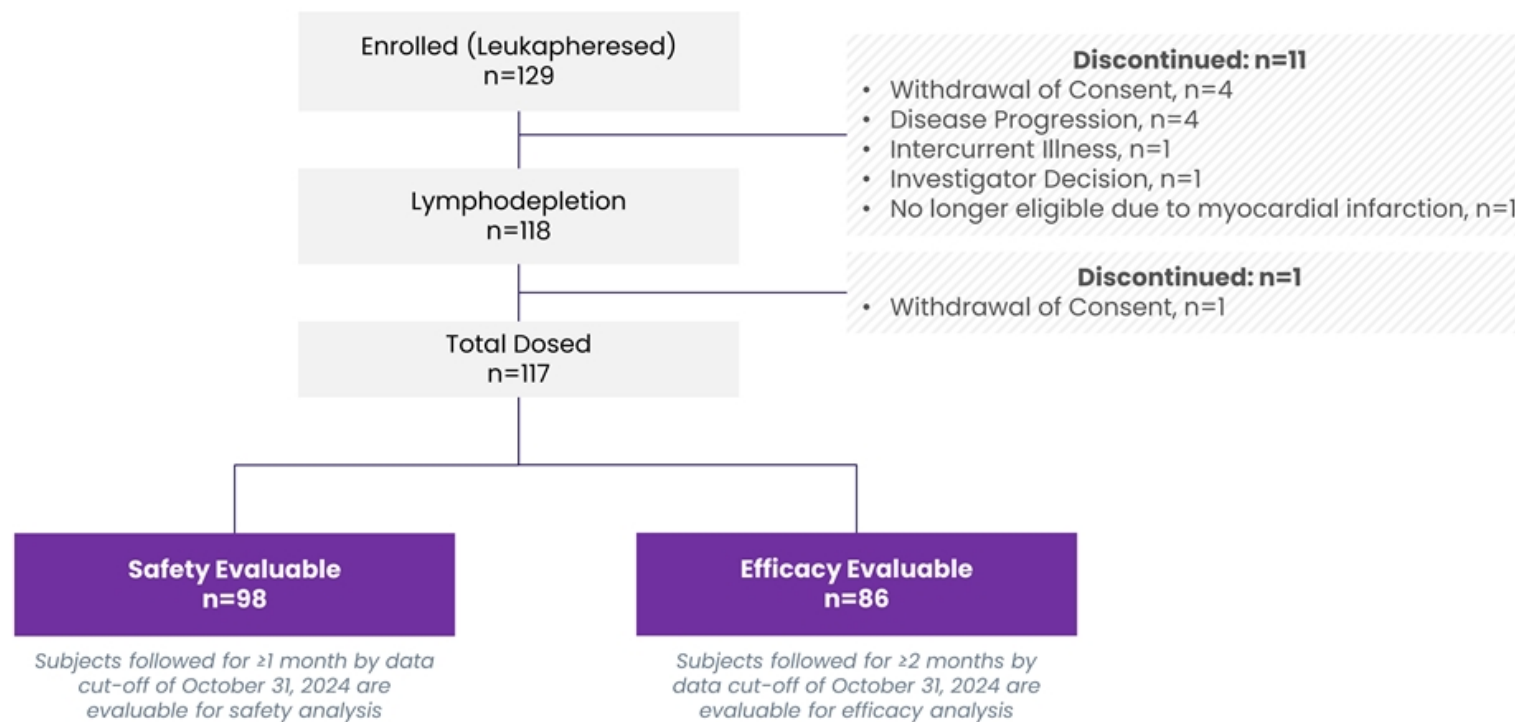
Primary Endpoint:

- ORR, per 2016 IMWG criteria

Key Secondary Endpoints:

- sCR/CR rate, per 2016 IMWG criteria
- ORR in patients limited to 3 prior LoT, per 2016 IMWG criteria

Primary and key secondary endpoints to be assessed per Independent Review Committee (IRC); Investigator assessment of response per IMWG also permitted per protocol.
CR, complete response; ECOG PS, Eastern Cooperative Oncology Group Performance Status; IMiD, immunomodulatory drug; IMWG, International Myeloma Working Group; LoT, line of therapy; ORR, overall response rate; PI, proteosome inhibitor; sCR, stringent complete response.
Freeman et al., Oral Presentation, ASH (Dec 2024)

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Anito-cel iMMagine-1: Overall Patient Disposition and Evaluable Populations

Enrolled (Leukapheresed)
n=129

Discontinued: n=11
- Withdrawal of Consent, n=4
- Disease Progression, n=4
- Intercurrent Illness, n=1
- Investigator Decision, n=1
- No longer eligible due to myocardial infarction, n=1

Lymphodepletion
n=118

Discontinued: n=1
- Withdrawal of Consent, n=1

Total Dosed
n=117

**Safety Evaluable
n=98**

Subjects followed for ≥1 month by data cut-off of October 31, 2024 are evaluable for safety analysis

**Efficacy Evaluable
n=86**

Subjects followed for ≥2 months by data cut-off of October 31, 2024 are evaluable for efficacy analysis

Anito-cel was successfully manufactured for 99% of patients enrolled

Total Patients Dosed per clinical database as of presentation date [12/09/2024]
Freeman et al., Oral Presentation, ASH (Dec 2024)

Anito-cel iMMagine-1: Patient and Disease Characteristics

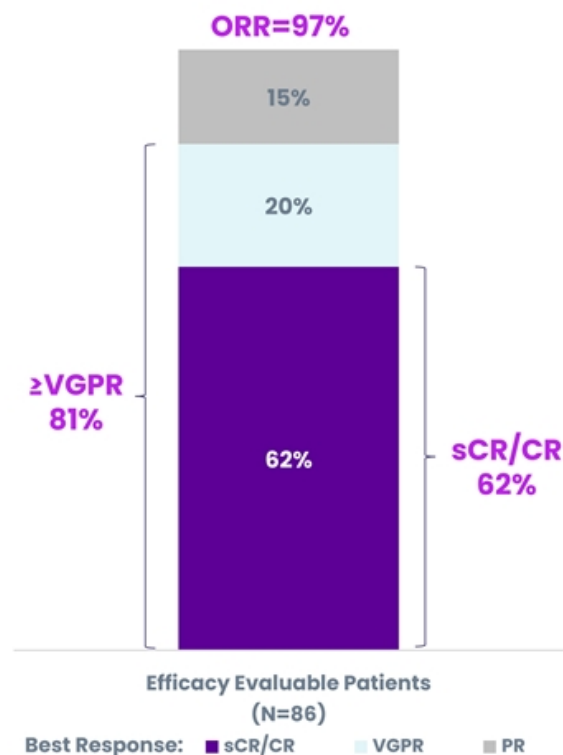|	Anito-cel iMMagine-1[1]	Cartitude-1[2]	KarMMa[3]
	N=98	N=97	N=128
Age group ≥ 65, # (%)	51 (52%)	35 (36%)	45 (35%)
Age group ≥ 70, # (%)	30 (31%)	--	20 (16%)[5]
Gender (Male / Female)	56% / 44%	59% / 41%	59% / 41%
Black / African-American, # (%)	9 (9%)	17 (18%)	--
ECOG[a] 0	45 (46%)	39 (40%)	57 (45%)
EMD[b], # (%)	16 (16%)	13 (13%)	50 (39%)*
High risk cytogenetics[c], # (%)	39 (40%)	23 (24%)	45 (35%)
Median prior therapies (min-max)	4 (3-8)	6 (3-18)	6 (3-16)
3 Prior lines of therapy, # (%)	45 (46%)	17 (18%)	128 (100%)**
Refractory to last line, # (%)	98 (100%)	96 (99%)	128 (100%)**
Triple refractory, # (%)	85 (87%)	85 (88%)	108 (84%)
Penta refractory, # (%)	41 (42%)	41 (42%)	33 (26%)
Median time since diagnosis (min-max)	7.2 (1 – 23)	5.9 (2 – 18)[4]	6.0 (1 – 18)
Prior ASCT, # (%)	73 (75%)	87 (90%)	120 (94%)
Bridging therapy, # (%)	65 (66%)	73 (75%)	112 (88%)
Outpatient administration	8 (8%)	0 (0%)	0 (0%)

Anito-cel iMMagine-1 data cut-off October 31, 2024; *Includes bone-based lesions (plasmacytomas); **Assumed per protocol requirements
Cross-trial data interpretation should be considered with caution as it is limited by differences in study population, study design, and other factors; a) Eastern Cooperative Oncology Group Performance Status Scale; b) EMD is a form of Multiple Myeloma characterized by the presence of a non-bone based plasmacytoma; c) Defined as the presence of Del 17p, t(14;16), or t(4;14)
[1]Freeman et al., Oral Presentation, ASH (Dec 2024); [2]Martin et al. (2023); [3]Munshi et al. (2021); [4]Janssen Carvykti Prior Line of Therapies (Dec 2024); [5]Berdeja et al. (2020)

Anito-cel iMMagine-1: Overall Response Rate and MRD Negativity
Efficacy Evaluable Patients (N=86)

ORR=97%

PR	15%
VGPR	20%
sCR/CR	62%

≥VGPR 81%

sCR/CR 62%

Efficacy Evaluable Patients (N=86)

Best Response: ■ sCR/CR   ■ VGPR   ■ PR

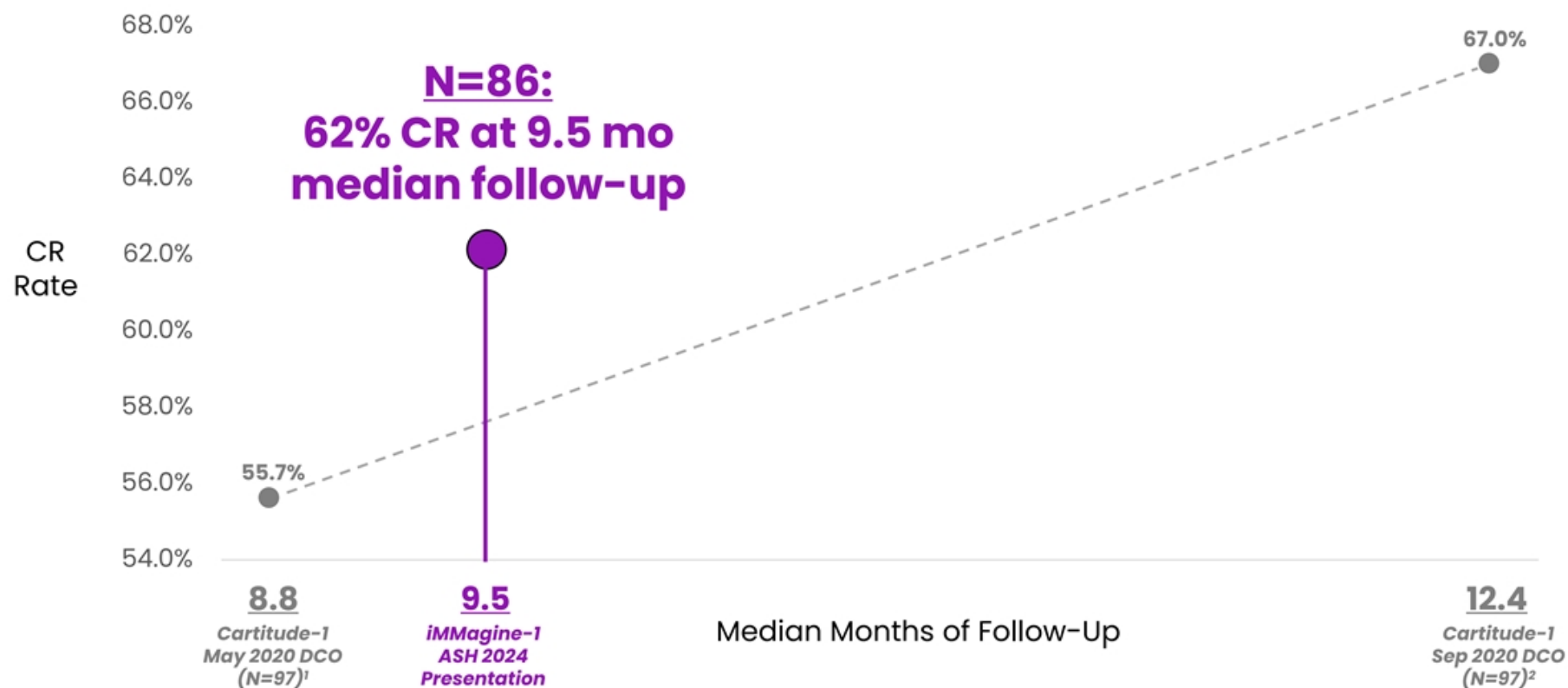At a median follow-up of 9.5 months, **ORR was 97% and sCR/CR rate was 62%**

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 ≤10^{-5}	54	1.0 (0.9 - 6.4)

Responses are investigator assessed per IMWG criteria, ORR defined as partial response or better; MRD evaluable patients had an identifiable malignant clone in the baseline bone marrow sample and had a post-treatment bone marrow sample sufficient to assess MRD negativity; CR, complete response; MRD, minimal residual disease; ORR, overall response rate; PR, partial response; sCR, stringent complete response; VGPR, very good partial response; Freeman et al., Oral Presentation, ASH (Dec 2024), Data cut-off October 31, 2024
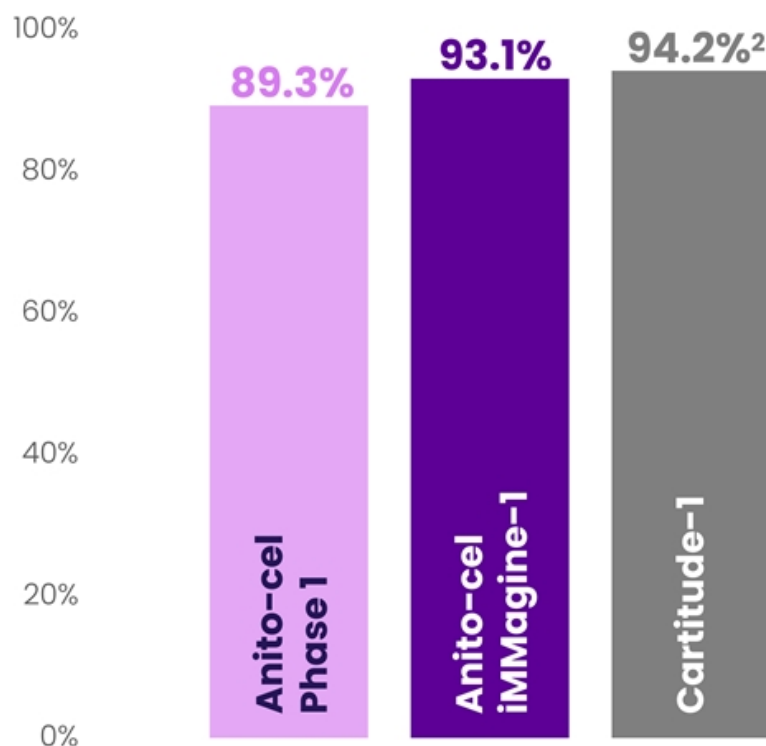
Anito-cel iMMagine-1: Complete Response Rate

CR Rate by Months of Follow-Up

N=86:
62% CR at 9.5 mo
median follow-up

CR Rate (y-axis): 68.0%, 66.0%, 64.0%, 62.0%, 60.0%, 58.0%, 56.0%, 54.0%

55.7%

67.0%

Median Months of Follow-Up (x-axis):

8.8 — *Cartitude-1 May 2020 DCO (N=97)[1]*

9.5 — *iMMagine-1 ASH 2024 Presentation*

12.4 — *Cartitude-1 Sep 2020 DCO (N=97)[2]*

Note: Cross-trial data interpretation should be considered with caution as it is limited by differences in median follow-up, study population, design and other factors
[1]Madduri et al. (2020); [2]Berdeja et al. (2021); Freeman et al., Oral Presentation, ASH (Dec 2024)

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Anito-cel iMMagine-1: Minimum Residual Disease

Minimum Residual Disease at 10^{-5} sensitivity

Bar chart:
- Anito-cel Phase 1: 89.3%
- Anito-cel iMMagine-1: 93.1%
- Cartitude-1: 94.2%[2]

▸ **Anito-cel sees** comparable depth of response to other BCMA CAR T products

▸ Patients demonstrated rapid response, with **median time to MRD negativity ~1 month**[1]

▸ **Anito-cel MRD- at 10^{-6} is 80.9%,** affirming deep depletion of malignant plasma cells[1]

Anito-cel iMMagine-1: 6-mo PFS Rate is 93.3%, 12-mo PFS Rate is 78.5%

6-Month PFS Estimates (%)

- Anito-cel Phase 1: 92.1%
- Anito-cel iMMagine-1: 93.3%
- Cartitude-1: 87.4%[1]

12-Month PFS Estimates (%)

- Anito-cel Phase 1: 75.9%
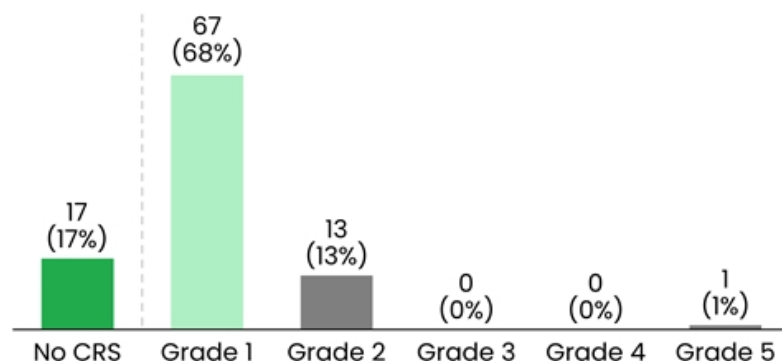- Anito-cel iMMagine-1: 78.5%
- Cartitude-1: 76.6%[1]

Note: Carvykti 6-mo PFS at 8.8 months of median follow-up, 12-mo PFS at 12.4 months of median follow-up. Median follow-up for anito-cel iMMagine-1 was 9.5 months [Range 2 – 23]
Cross-trial data interpretation should be considered with caution as it is limited by differences in median follow-up, study population, design and other factors.
Anito-cel Phase 1 data (N=38): Bishop et al, American Society of Hematology 2024, Poster 4825; Anito-cel iMMagine-1 data (N=86): Freeman et al., Oral Presentation, ASH (Dec 2024); [1]Madduri et al. (2020) including supplementary materials (N=97)

Anito-cel iMMagine-1: Cytokine Release Syndrome

Maximum CRS Grade (N=98)

- 17 (17%) No CRS
- 67 (68%) Grade 1
- 13 (13%) Grade 2
- 0 (0%) Grade 3
- 0 (0%) Grade 4
- 1 (1%) Grade 5

- 83% (81/98) of patients had CRS of any Grade; the median onset was 4 days
- 86% (84/98) of patients had CRS Grade 1 or less, including 17% (17/98) with no CRS
- % of patients with either no CRS or CRS that resolved by:
  - ≤7 days of anito-cel infusion: 63% (62/98)
  - ≤10 days of anito-cel infusion: 92% (90/98)
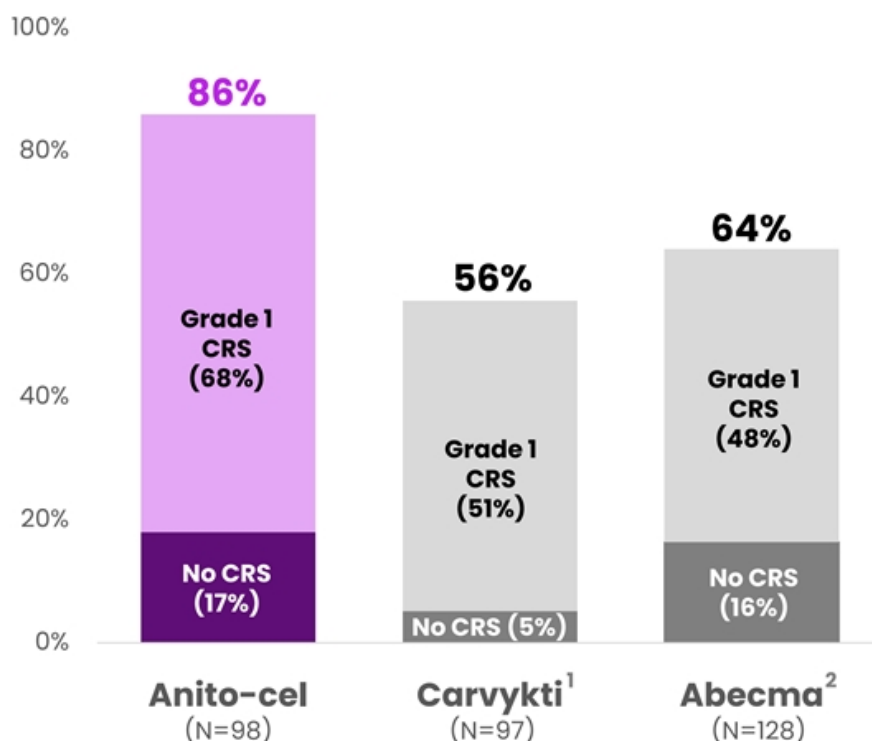 - ≤14 days of anito-cel infusion: 98% (96/98)

ASTCT, American Society for Transplantation and Cellular Therapy
Freeman et al., Oral Presentation, ASH (Dec 2024), Data cut-off October 31, 2024

Cytokine Release Syndrome (CRS) Per ASTCT criteria	Safety Evaluable Patients N=98
Median onset (min - max)	4 days (1 - 17 days)
Median duration (min - max)	3 days (1 - 9 days)
Supportive Measures	
Tocilizumab	72% (71/98)
Dexamethasone	65% (64/98)
Anakinra	8% (8/98)
Siltuximab	4% (4/98)
Vasopressor used	1% (1/98)
Intubation/mechanical ventilation	1% (1/98)

- CRS management per protocol was in line with standard medical practice with no prophylactic administration of tocilizumab or dexamethasone
  - For CRS onset in the first 48 hours, tocilizumab and dexamethasone were protocol recommended
  - For CRS onset after the first 48 hours, if tocilizumab was administered at investigator discretion, dexamethasone was also recommended
- 2/3 of all patients who received dexamethasone only ever received a single dose of 10 mg of dexamethasone
- Grade 5 CRS occurred in a 76-year-old patient who had rapidly progressive disease between screening and baseline and did not receive bridging therapy

Anito-cel iMMagine-1: Majority of Patients with ≤ Grade 1 CRS

% of Patients with CRS Grade 1 or Less

Chart data:

- **Anito-cel** (N=98): 86% total — No CRS (17%), Grade 1 CRS (68%)
- **Carvykti[1]** (N=97): 56% total — No CRS (5%), Grade 1 CRS (51%)
- **Abecma[2]** (N=128): 64% total — No CRS (16%), Grade 1 CRS (48%)

In the 83% of patients with CRS, **Median onset was 4 days** (range: 1–17 days)
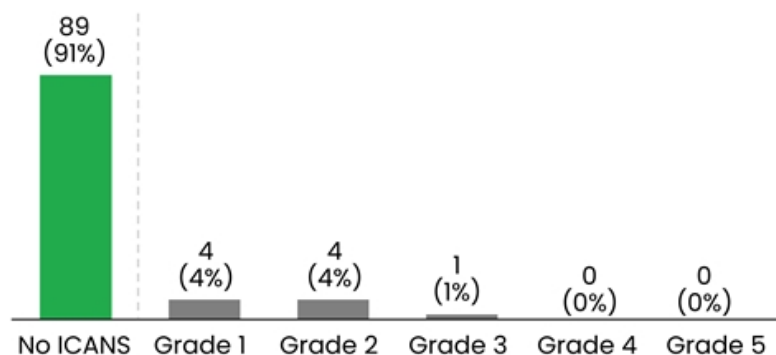
86% (84/98) of CRS cases ≤ Gr 1, including 17% of patients with no CRS

92% of patients either had no CRS or CRS that resolved within 10 days of anito-cel infusion

Note: Standard practice CRS management used across studies (no prophylactic steroid or tocilizumab utilization). Cross-trial data interpretation should be considered with caution as it is limited by differences in median follow-up, study population, design and other factors.
Freeman et al., Oral Presentation, ASH (Dec 2024); [1]Berdeja et al. (2021); [2]Munshi et al. (2021)

Anito-cel iMMagine-1: Majority of Patients with ≤ Grade 1 CRS

% of Patients with CRS Grade 2 or Less

In the 83% of patients with CRS, Median onset was 4 days (range: 1–17 days)

86% (84/98) of CRS cases ≤ Gr 1, including 17% of patients with no CRS

92% of patients either had no CRS or CRS that resolved within 10 days of anito-cel infusion

Note: Standard practice CRS management used across studies (no prophylactic steroid or tocilizumab utilization). Cross-trial data interpretation should be considered with caution as it is limited by differences in median follow-up, study population, design and other factors.
Freeman et al., Oral Presentation, ASH (Dec 2024); [1]Berdeja et al. (2021); [2]Munshi et al. (2021)

Anito-cel iMMagine-1: Immune Effector Cell-associated Neurotoxicity Syndrome

Maximum ICANS Grade (N=98)

Grade	Count
No ICANS	89 (91%)
Grade 1	4 (4%)
Grade 2	4 (4%)
Grade 3	1 (1%)
Grade 4	0 (0%)
Grade 5	0 (0%)

ICANS Per ASTCT criteria	Safety Evaluable Patients N=98
Median onset (min - max[a])	7 days (2 - 10[a] days)
Median duration (min - max[b])	4 days (1 - 10[b] days)
Supportive Measures	
Tocilizumab	3% (3/98)
Dexamethasone	6% (6/98)
Anakinra	1% (1/98)
Siltuximab	1% (1/98)

[a] With the exception of n=1 Grade 1 ICANS (confusion) on day 34 post infusion that rapidly resolved
[b] With the exception of n=1 max Grade 2 ICANS with 29-day duration to resolution

- 9% (9/98) of patients had ICANS of any grade; all cases resolved

- No delayed or non-ICANS neurotoxicities were observed, including no incidence of Parkinsonism, no cranial nerve palsies, and no Guillain-Barré syndrome (n=98)

- Similarly, no delayed or non-ICANS neurotoxicities have been observed in the Phase 1 study[1] (n=38, median follow-up of 38.1 months with minimum follow-up of 25 months)

1. Bishop, et al. Blood 2024; ASH Annual Meeting, Poster #4825.
ASTCT, American Society for Transplantation and Cellular Therapy; Freeman et al., Oral Presentation, ASH (Dec 2024), Data cut-off October 31, 2024
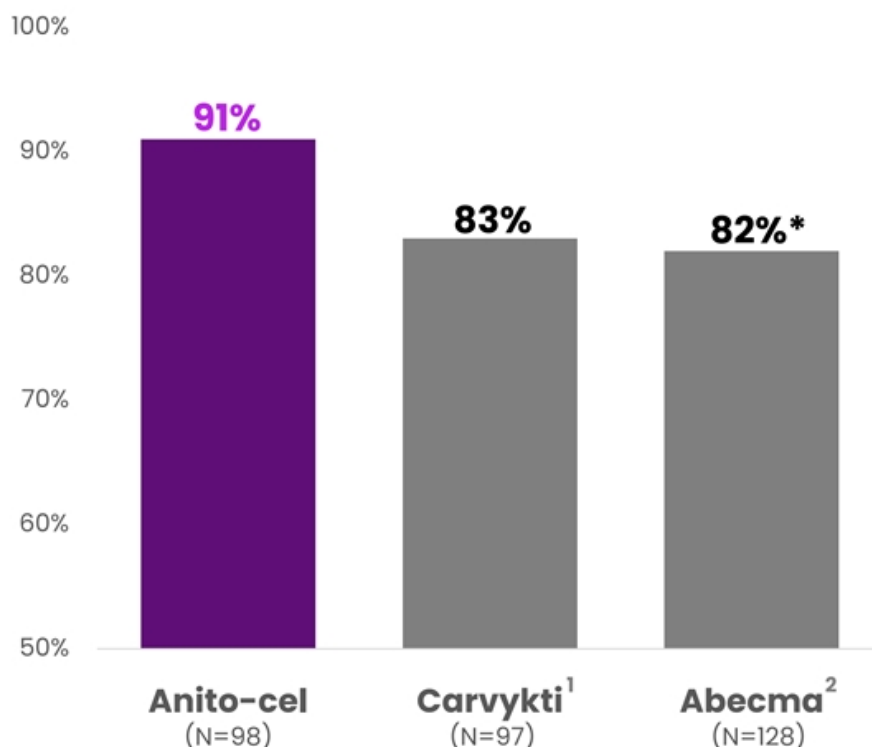
Anito-cel iMMagine-1: Majority of Patients with No ICANS
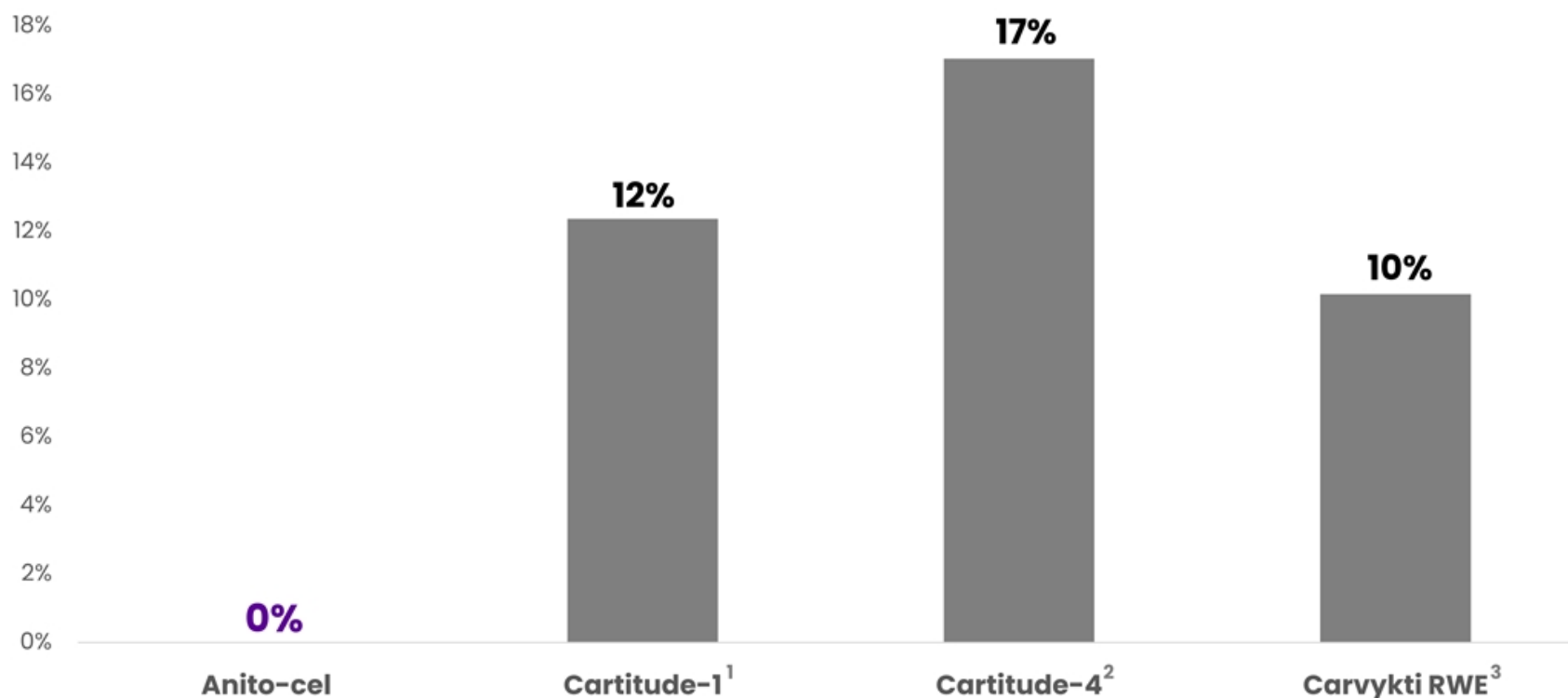
% of Patients with No ICANS

**91% of patients
did not have ICANS**

**ICANS of any grade was observed in 9
patients (9%), of which 1 (1%) was
Grade 3, all cases resolved**

**No delayed or non-ICANS
neurotoxicities were observed,
including no incidence of
Parkinsonism, no cranial nerve
palsies, and no Guillain-Barré
syndrome to date**

*All neurotoxic events considered as ICANS and non-ICANS toxicity not separated
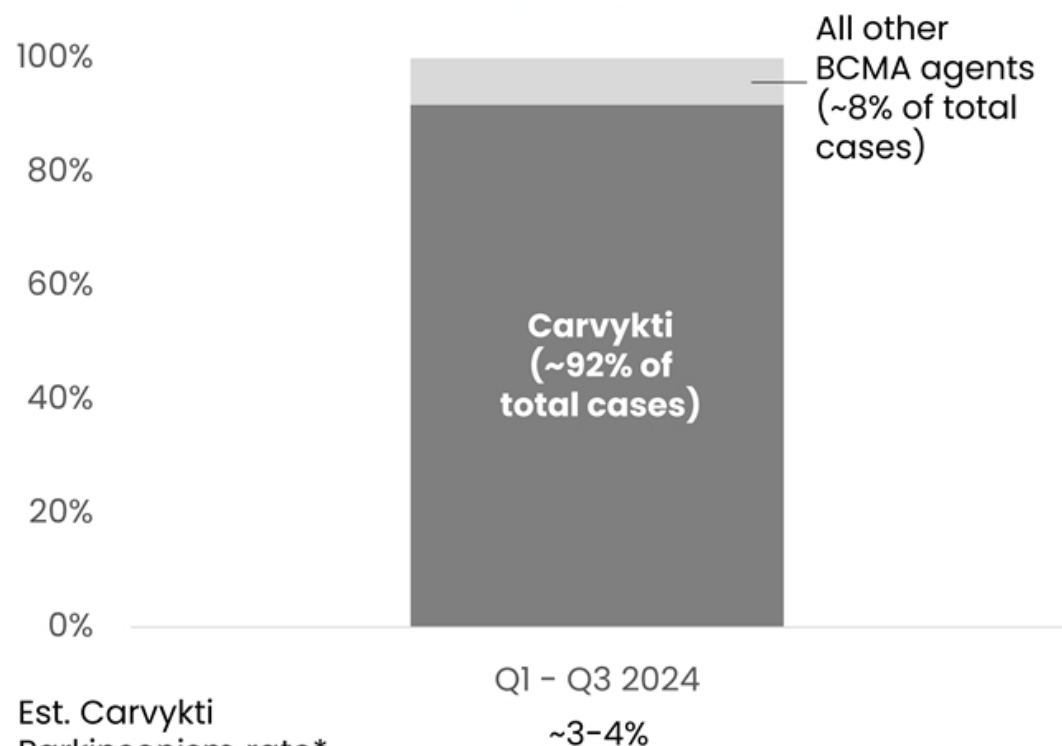Note: Cross-trial data interpretation should be considered with caution as it is limited by differences in median follow-up, study population, design, and other factors.
Freeman et al., Oral Presentation, ASH (Dec 2024), Data cut-off October 31, 2024; [1]Berdeja et al. (2021); [2]Munshi et al. (2021)

Anito-cel iMMagine-1: Zero Cases of Delayed Neurotoxicity

% of Patients with Delayed or Non-ICANS Neurotoxicity

- Anito-cel: 0%
- Cartitude-1[1]: 12%
- Cartitude-4[2]: 17%
- Carvykti RWE[3]: 10%

Note: Cross-trial data interpretation should be considered with caution as it is limited by differences in median follow-up, study population, design, and other factors.
Freeman et al., Oral Presentation, ASH (Dec 2024), Data cut-off October 31, 2024; [1]Berdeja et al (2021); [2]San-Miguel et al. (2023); [3]Sidana et al (2024)

Anito-cel iMMagine-1: Zero Cases of Parkinsonism

Number of Parkinsonism Cases Reported via FDA Adverse Events Reporting System (FAERS)

All other BCMA agents (~8% of total cases)

Carvykti (~92% of total cases)

100%
80%
60%
40%
20%
0%

Q1 – Q3 2024

Est. Carvykti Parkinsonism rate*

~3-4%

▸ In 2024, of those patients treated with BCMA therapies, **Carvykti treated ~40–50%**

▸ **Parkinsonism cases are driven by Carvykti (~92% of BCMA targeted agents)** despite movement into earlier lines of therapy

▸ **Anito-cel has seen 0 cases of delayed neurotoxicity** in >150 patients treated to date (6×10^{-8}% odds ratio using binomial probability of seeing an event at observed Caryvkti rate ~13%)

Note: Data shown as reported to FAERS (Latest FDA receipt date). FAERS Query was "PARKINSONISM"; All other BCMA agents includes Abecma, Tecvayli, Elrexfio
*Estimated based on quarterly Carvykti sales and assumed product price
Source: FDA FAERS Database (2024)

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Anito-cel iMMagine-1: Safety Profile

- ▸ >150 patients have been treated with anito-cel to date between the Phase 1 and iMMagine-1 studies, 38 patients have minimum follow-up of at least 25 months

- ▸ Out of all BCMA CAR T pivotal trials to date, iMMagine-1 had the highest rates of $\leq$ Grade 1 CRS (N=84, 86%), including 17% with no CRS, and $\leq$ Grade 1 ICANS (N=93, 95%), including 91% with no ICANS

- ▸ No delayed or non-ICANS neurotoxicities have been observed to date, including no Parkinsonism, no cranial nerve palsies, and no Guillain-Barré syndrome

- ▸ No secondary primary malignancies of T-cell origin; no replication competent lentivirus detected

- ▸ Three deaths occurred due to AEs (related or unrelated to anito-cel) in iMMagine-1
  - – Retroperitoneal hemorrhage* secondary to biopsy complication in the context of plasma cell leukemia developing prior to anito-cel infusion
  - – CRS
  - – Fungal infection

**Anito-cel has shown a differentiated safety profile
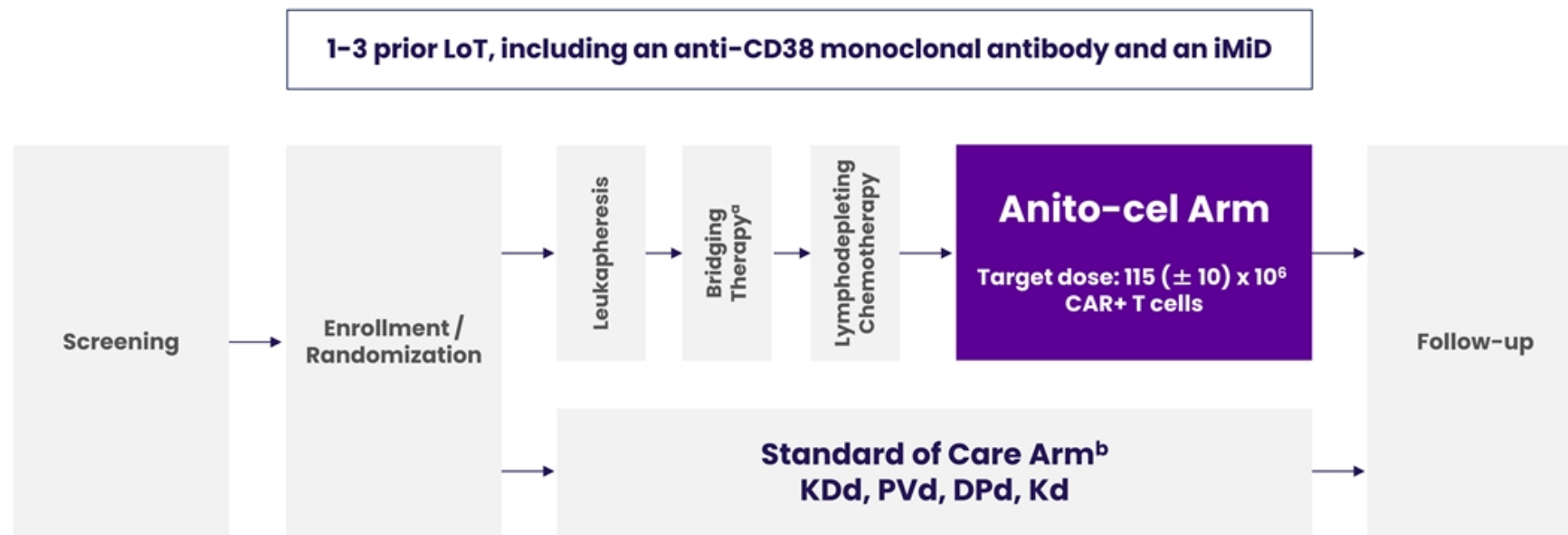in the Phase 1 and iMMagine-1 studies to date**

*Evidence of Grade 4 HLH at time of death (only case of HLH to date)
Freeman et al., Oral Presentation, ASH (Dec 2024)

Anito-cel iMMagine-1: Conclusions

▸ **Anito-cel utilizes a novel, synthetic, compact, and stable D-Domain binder**
- D-Domain facilitates high transduction efficiency, CAR positivity, and CAR density on the T-cell surface and has a fast off-rate

▸ **Anito-cel demonstrated deep and durable efficacy at a median follow-up of 9.5 months**
- ORR was 97% and sCR/CR rate was 62%, per IMWG criteria
- 93.1% of MRD evaluable patients (n=54/58) were MRD negative at 10^{-5} or lower
- Median PFS and OS not reached; 12-month PFS rate was 78.5% and OS rate was 96.5%

▸ **The anito-cel safety profile is predictable and manageable**
- No delayed or non-ICANS neurotoxicities to date, including no Parkinsonism, no cranial nerve palsies, and no Guillain-Barré syndrome reported across clinical trials
- 86% of patients did not have CRS or had a max Grade 1 CRS
- 91% of patients did not have ICANS

▸ **More than 150 patients dosed across the anito-cel programs for RRMM**

Anito-cel demonstrated deep, durable responses in 4L+ RRMM with a manageable safety profile, including no delayed or non-ICANS neurotoxicities

Anito-cel iMMagine-3 (NCT06413498): Global Phase 3 Trial Currently Enrolling

1-3 prior LoT, including an anti-CD38 monoclonal antibody and an iMiD

Screening → Enrollment / Randomization

Leukapheresis → Bridging Therapy[a] → Lymphodepleting Chemotherapy → **Anito-cel Arm** Target dose: 115 ($\pm$ 10) x 10^6 CAR+ T cells → Follow-up

Standard of Care Arm[b] KDd, PVd, DPd, Kd

Study Design
- 1:1 Randomization
- n = Approximately 450, ~130 sites globally

Study Endpoints
- Primary Endpoint: PFS
- Key Secondary Endpoints: CR rate, MRD, OS, safety

[a]Optional Bridging therapy will be the SOC regimen selected prior to randomization
[b]Cycles will continue until unacceptable toxicity, progression as per IMWG criteria, or patient withdrawal of consent

References

▸ Anderson, Jr, L. D., Munshi, N. C., Shah, N., Jagannath, S., Berdeja, J. G., Lonial, S., Raje, N. S., Siegel, D. S., Lin, Y., Oriol, A., Moreau, P., Yakoub-Agha, I., Delforge, M., Petrocca, F., Patel, P., Huang, L., Campbell, T. B., Hege, K., & F. San-Miguel, J. (2021). Idecabtagene vicleucel (IDE-Cel, BB2121), a BCMA-directed car T cell therapy, in relapsed and refractory multiple myeloma: Updated KARMMA results. Journal of Clinical Oncology, 39(15_suppl), 8016–8016. https://doi.org/10.1200/jco.2021.39.15_suppl.8016

▸ Berdeja, J. G., Raje, N. S., Siegel, D. S., Lin, Y., Anderson, L. D., Rodriguez-Otero, P., Manier, S., Einsele, H., Cavo, M., Truppel-Hartmann, A., Rowe, E., Sanford, J., Wang, J., Campbell, T. B., & Jagannath, S. (2021). Efficacy and safety of Idecabtagene Vicleucel (IDE-Cel, BB2121) in elderly patients with relapsed and refractory multiple myeloma: Karmma subgroup analysis. Transplantation and Cellular Therapy, 27(3). https://doi.org/10.1016/s2666-6367(21)00512-1

▸ Berdeja, J. G., Madduri, D., Usmani, S. Z., Jakubowiak, A., Agha, M., Cohen, A. D., Stewart, A. K., Hari, P., Htut, M., Lesokhin, A., Deol, A., Munshi, N. C., O'Donnell, E., Avigan, D., Singh, I., Zudaire, E., Yeh, T.-M., Allred, A. J., Olyslager, Y., … Jagannath, S. (2021). Ciltacabtagene autoleucel, a B-cell maturation antigen-directed chimeric antigen receptor T-cell therapy in patients with relapsed or refractory multiple myeloma (cartitude-1): A phase 1b/2 open-label study. The Lancet, 398(10297), 314–324. https://doi.org/10.1016/s0140-6736(21)00933-8

▸ Bishop et al, American Society of Hematology 2024, Poster 4825

▸ CARVYKTI® (ciltacabtagene autoleucel) HCP. CARTITUDE-4 Study | CARVYKTI® (ciltacabtagene autoleucel) HCP. (n.d.). https://www.carvyktihcp.com/cartitude-4-efficacy/

▸ CARVYKTI® (ciltacabtagene autoleucel). janssen science wordmark. (n.d.). https://www.janssenscience.com/products/carvykti/medical-content/carvykti-outpatient-administration#biblioRef08

▸ Freeman et al, American Society of Hematology 2024, Abstract 1031

▸ Gong, Z., Umoru, G., Monge, J., Shah, N., Mohyuddin, G. R., Radhakrishnan, S. V., Chakraborty, R., Rasche, L., Schinke, C., D'Souza, A., & Mohan, M. (2024, March 5). Adverse effects and non-relapse mortality of BCMA directed T cell therapies in multiple myeloma: An faers database study. Nature News. https://www.nature.com/articles/s41408-024-01023-9

▸ Liu, A. (2023, April 19). J&J, legend's carvykti cut risk of progression or death by whopping 74% in earlier myeloma, leaked abstract shows. Fierce Pharma. https://www.fiercepharma.com/pharma/leaked-abstract-show-jj-legends-carvykti-reduce-progression-or-death-74-earlier-myeloma#:~:text=That's%20significant%2C%20because%20current%20reports,or%205%20episodes%20were%20recorded.

▸ Madduri, D. (n.d.). Cartitude-1: Phase 1b/2 study of Ciltacabtagene Autoleucel, a B-cell maturation antigen–directed chimeric antigen receptor T cell therapy, in relapsed/refractory multiple myeloma. ash.confex.com. https://ash.confex.com/ash/2020/webprogram/Paper136307.html

▸ Martin, T., Usmani, S. Z., Schecter, J. M., Roccia, T., Jackson, C. C., Deraedt, W., … Samjoo, I. A. (2022). Updated results from a matching-adjusted indirect comparison of efficacy outcomes for ciltacabtagene autoleucel in CARTITUDE-1 versus idecabtagene vicleucel in KarMMa for the treatment of patients with relapsed or refractory multiple myeloma. Current Medical Research and Opinion, 39(1), 81–89. https://doi.org/10.1080/03007995.2022.2139052

▸ Martin T, Usmani SZ, Berdeja JG, Agha M, Cohen AD, Hari P, Avigan D, Deol A, Htut M, Lesokhin A, Munshi NC, O'Donnell E, Stewart AK, Schecter JM, Goldberg JD, Jackson CC, Yeh TM, Banerjee A, Allred A, Zudaire E, Deraedt W, Olyslager Y, Zhou C, Pacaud L, Madduri D, Jakubowiak A, Lin Y, Jagannath S. Ciltacabtagene Autoleucel, an Anti-B-cell Maturation Antigen Chimeric Antigen Receptor T-Cell Therapy, for Relapsed/Refractory Multiple Myeloma: CARTITUDE-1 2-Year Follow-Up. J Clin Oncol. 2023 Feb 20;41(6):1265-1274. doi: 10.1200/JCO.22.00842. Epub 2022 Jun 4. PMID: 35658469; PMCID: PMC9937098.

▸ Munshi, N. C., Anderson, L. D., Shah, N., Madduri, D., Berdeja, J., Lonial, S., Raje, N., Lin, Y., Siegel, D., Oriol, A., Moreau, P., Yakoub-Agha, I., Delforge, M., Cavo, M., Einsele, H., Goldschmidt, H., Weisel, K., Rambaldi, A., Reece, D., … San-Miguel, J. (2021). Idecabtagene Vicleucel in relapsed and refractory multiple myeloma. New England Journal of Medicine, 384(8), 705–716. https://doi.org/10.1056/nejmoa2024850

▸ Neurologic toxicities: ABECMA® (idecabtagene vicleucel). Neurologic Toxicities | ABECMA® (idecabtagene vicleucel). (n.d.). https://www.abecmahcp.com/safety/nt

▸ San-Miguel, J., Dhakal, B., Yong, K., Spencer, A., Anguille, S., Mateos, M.-V., Fernández de Larrea, C., Martínez-López, J., Moreau, P., Touzeau, C., Leleu, X., Avivi, I., Cavo, M., Ishida, T., Kim, S. J., Roeloffzen, W., van de Donk, N. W. C. J., Dytfeld, D., Sidana, S., … Einsele, H. (2023). CILTA-CEL or standard care in lenalidomide-refractory multiple myeloma. New England Journal of Medicine, 389(4), 335–347. https://doi.org/10.1056/nejmoa2303379

▸ Sidana, S., Patel, K., Peres, L., Bansal, R., Kocoglu, M., Atrash, S., Dima, D., Smith, K., Ferreri, C., Midha, S., Dhakal, B., Herr, M., Nadeem, O., Reshef, R., Hashim, M., Kumar, A., Kalariya, N., Sborov, D., Richard, S., Khouri, J., Martin, T., Htut, Shune, L., Lin, Y., Hansen, D. (2024, September 25). Safety and Efficacy of Standard of Care Ciltacabtagene Autoleucel for Relapsed/Refractory Multiple Myeloma (RRMM): Real World Experience. IMS 2024.

Agenda

Opening Remarks 10 min

Rami Elghandour

Chairman and Chief Executive Officer, Arcellx

iMMagine-1 Oral Presentation 20 min

Ciara L. Freeman M.D., Ph.D
iMMagine-1 Clinical Study Investigator

Physician Panel Discussion 30 min

Q&A 30 min

Thank You