The Next Revolution in Cell Therapy

Leading Today, Creating Tomorrow

March 2023

Allogene THERAPEUTICS

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Caution should be exercised when interpreting results from separate trials involving separate product candidates. There are differences in the clinical trial design, patient populations, follow-up times, and the product candidates themselves, and the results from the clinical trials of autologous products may have no interpretative value on our existing or future results.

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Allogene: On a Mission for Patients

6 Foundational platform technologies

- AlloCAR T™
- TurboCAR™
- Cloak™ & Dagger™
- Alloy™ manufacturing
- iPSC

Cell Forge 1

>175 Patients treated*

Data from nearly as many patients with AlloCAR T as from key competitors combined

*Phase 1 trials

$576 million

in cash, cash equivalents and investments as of December 31, 2022

Resources focused on defining the field and writing the allogeneic CAR T playbook

1

singular focus on allogeneic cell therapy

The industry's **first** Potentially Pivotal Phase 2 allogeneic CAR T trial

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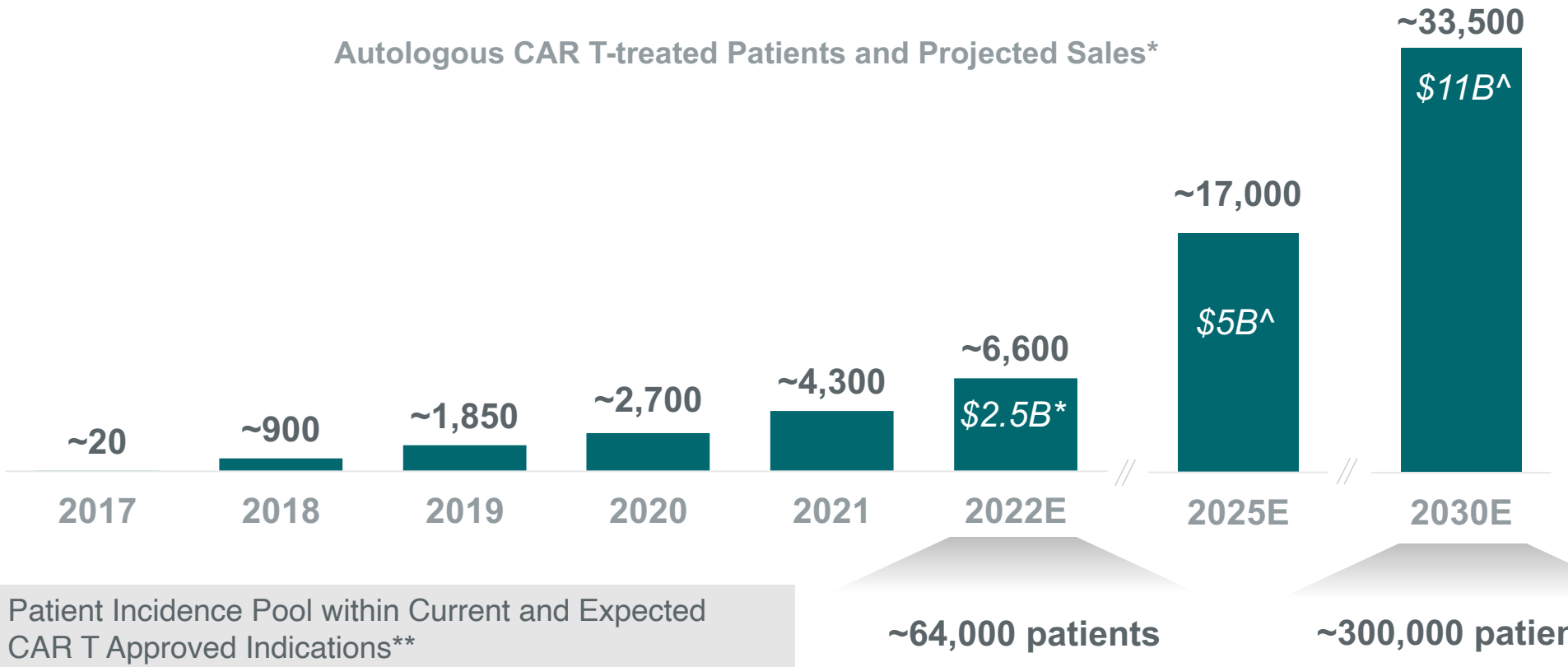
CAR T Sales Projected to Grow into an Expanding Market



~10%

of indicated patients** receive autologous CAR T therapy today

Patient Incidence Pool within Current and Expected CAR T Approved Indications**

~64,000 patients

~300,000 patients

*2017-2022 estimated and rounded based on manufacturer-reported sales (w/Q4'22 projected at Q3'22 actual sales rate) and average $400K/patient assumption; 2025-2030 estimated and rounded based on Decision Resources Group sales and market share projections

**Decision Resources Group epidemiology for drug-treated incidence G7 markets, rounded and not necessarily reflecting specific medical eligibility criteria for autologous CAR T therapies; current indications defined as 2L/3L+ LBCL, 3L+ FL, r/r MCL, r/r Adult ALL, r/r/ Pediatric/Young Adult ALL, 5L+ MM; expected future indications represent Allogene assumptions on CAR T indications in 2030 and include 1L+ LBCL, 2L+ FL, r/r MCL, 1L+ MM

^ Decision Resources Group estimated autologous CAR T sales for 2L+ LBCL, 2L+ FL, 3L+ MCL and 3L+ MM in 2025 and 2L+ LBCL, 2L+ FL, 3L+ MCL, and 1L+ MM in 2030

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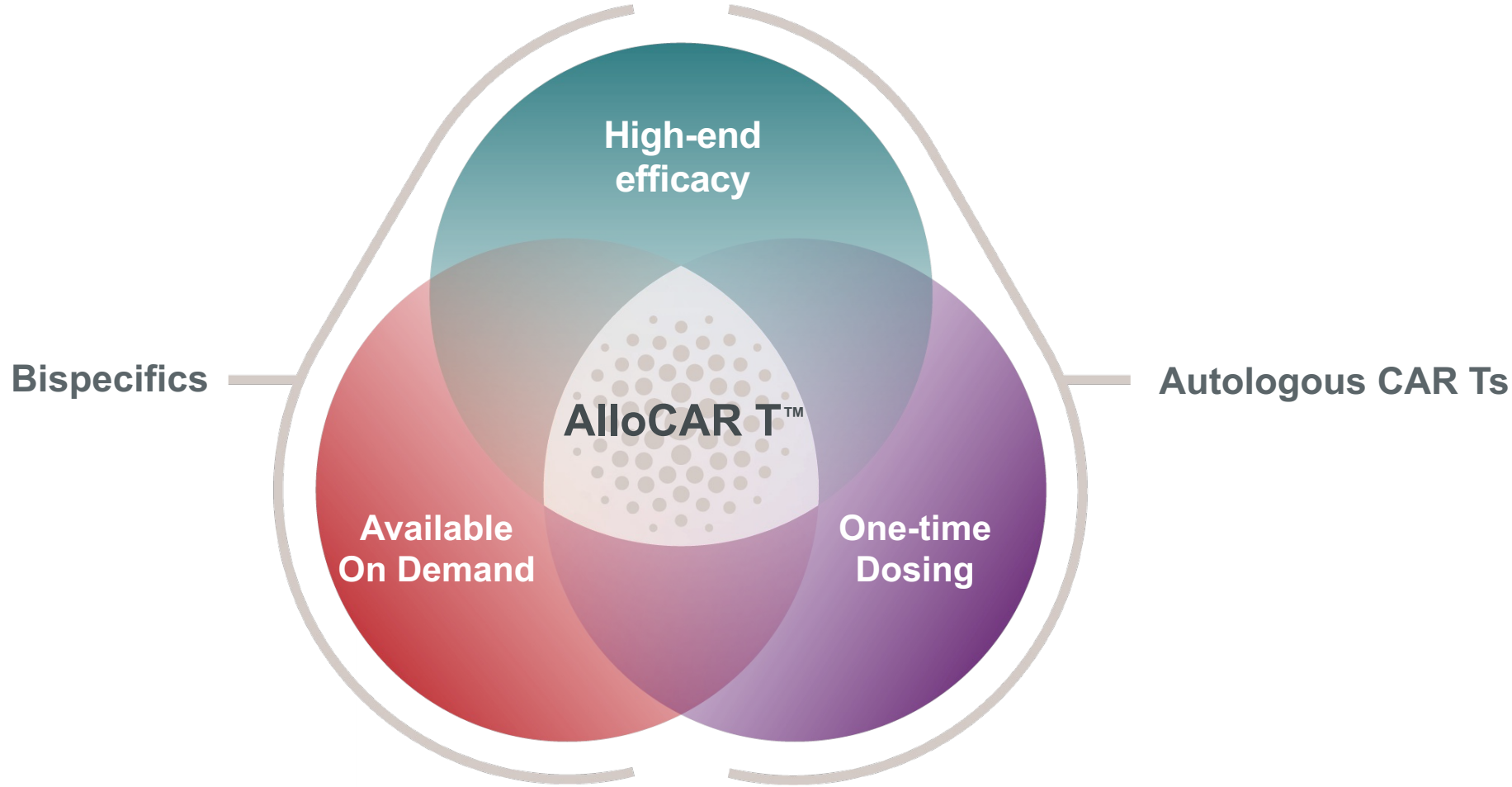
AlloCAR T Uniquely Positioned to Deliver Value to Patients



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Deep AlloCAR T Pipeline Opportunity

	Target	Program	Trial name	Study population	Discovery	IND-enabling	Phase 1	Phase 2[1]	Approved	Designation	Next milestone
Hematologic Malignancies	CD19	ALLO-501A	ALPHA2	3+ Line LBCL						FTD RMAT	Target enrollment completion 1H 2024
	CD19	ALLO-501A + ALLO-647[2]	EXPAND	3+ Line LBCL							Initiation activities underway
	CD19	ALLO-501A	ALPHA3	2+ Line LBCL							Ph3 readiness in 2023
	CD19	CD19 - Next Generation									
	BCMA	ALLO-715	UNIVERSAL	5+ Line MM						RMAT ODD	Reviewing Process Improvements
	BCMA	ALLO-605[3]	IGNITE	5+ Line MM						FTD ODD	Reviewing Process Improvements
	CD70	ALLO-316		Heme Malignancies							
	FLT3	ALLO-819		AML							
Solid Tumors	CD70	ALLO-316	TRAVERSE	ccRCC						FTD	Cohort expansion 2023
	CD70	ALLO-316		Basket Study							Determine histologies for inclusion
	DLL3	ALLO-213		SCLC							
	Claudin 18.2	ALLO-182		Gastric & Pancreatic Cancer							
		7 undisclosed targets									

[1]Phase 3 may not be required if Phase 2 is registrational; [2]ALLO-647 (anti-CD52 mAb) is intended to enable expansion and persistence of allogeneic CAR T product candidates; [3]TurboCAR™

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CD19 Program

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ALLO-501A: 1st Allogeneic CAR T to Enter Phase 2 Pivotal Study

Program Optimization

Dosing
- Lymphodepletion: Identified ALLO-647 dose response relationship
- Cell Dosing: single 120M cell infusion chosen for Phase 2

Manufacturing
- Alloy™ material demonstrates robust performance

Next Steps
- Complete Phase 2 trial enrollment in r/r LBCL (1H 2024)
- Earlier line Phase 3 readiness expected in 2023; initiation in 1H 2024

ALPHA & ALPHA2 Trials

Efficacy: Appears Comparable to Approved CD19 Autologous CAR Ts
- 67% ORR and 58% CR in r/r LBCL among the 12 patients treated with the Single Dose FCA90 regimen using Alloy™ process material
- Robust durability with 6- and 12-month CR rates of 50%

Safety: Appears Similar or Slightly Better than Autologous CAR Ts
- No DLTs, GvHD or severe ICANS
- Low grade CRS
- 17% prolonged Gr3+ cytopenia
- Grade 3+ infection rates similar to autologous CAR T trials

Delivery: Ability to Meet Current Demand & Grow Market
- Scalable, optimized Alloy™ manufacturing process
- 100% of product in spec with treatment within 2-5 days of enrollment

ALPHA/ALPHA2 Data Cutoff Date: October 25, 2022

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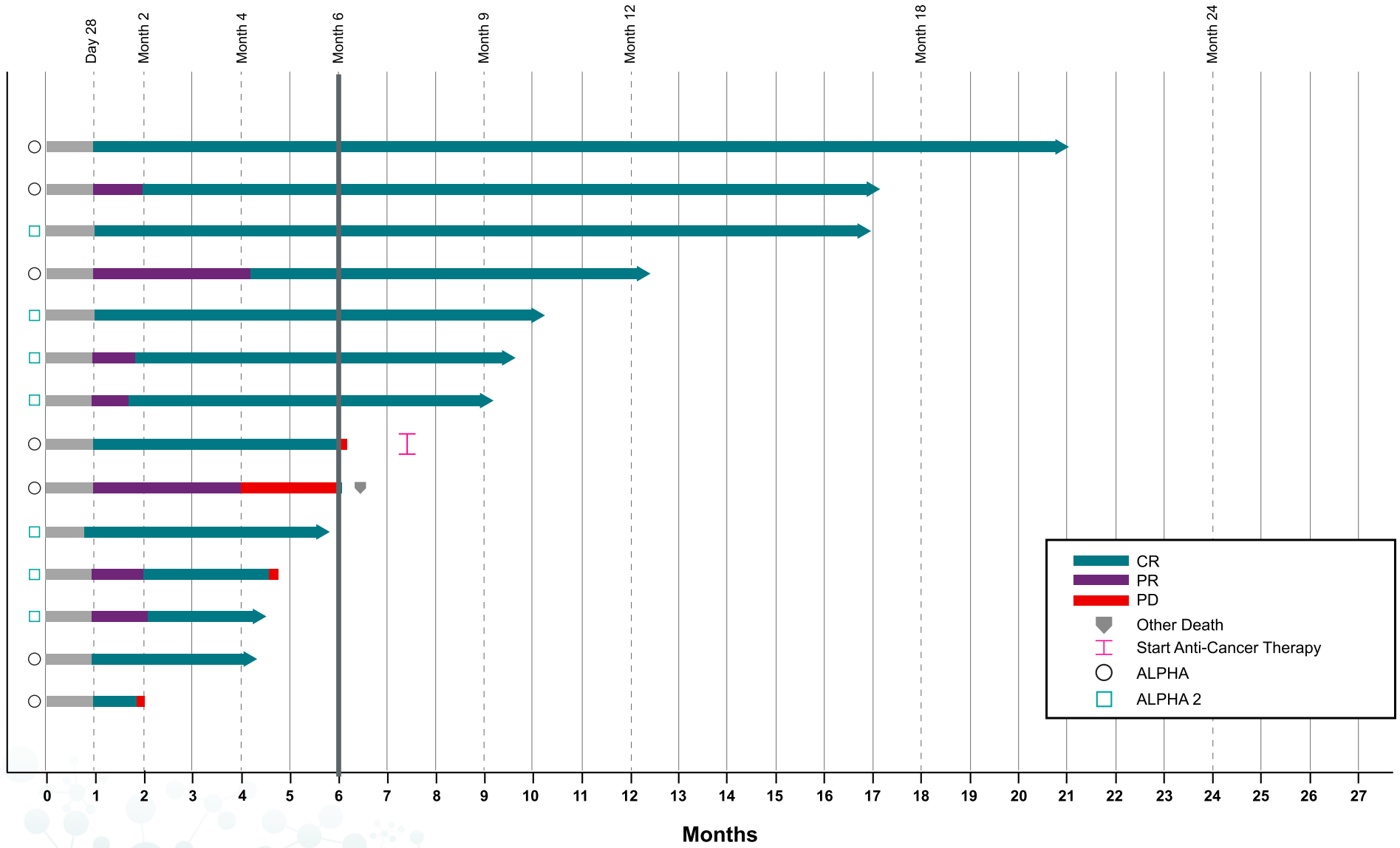
ASH 2021: Status of LBCL Patients Who Achieved a Complete Response



10 of 14 patients were in ongoing CR

Data Cutoff Date: October 18, 2021

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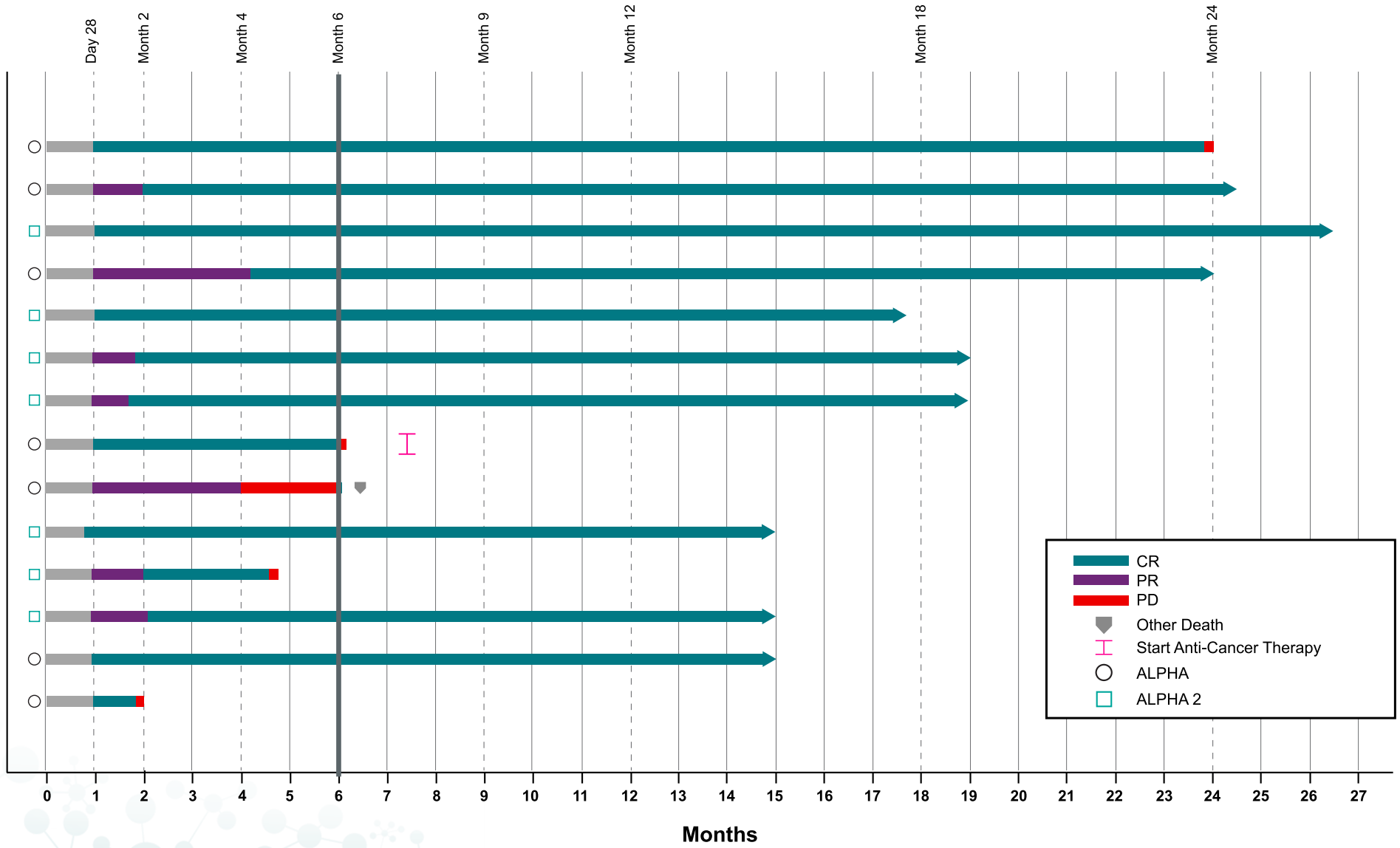
Oct 2022 Update: Responses Remain Durable in LBCL with Additional Follow-Up



9 of 14 patients in ongoing CR

Data Cutoff Date: October 25, 2022

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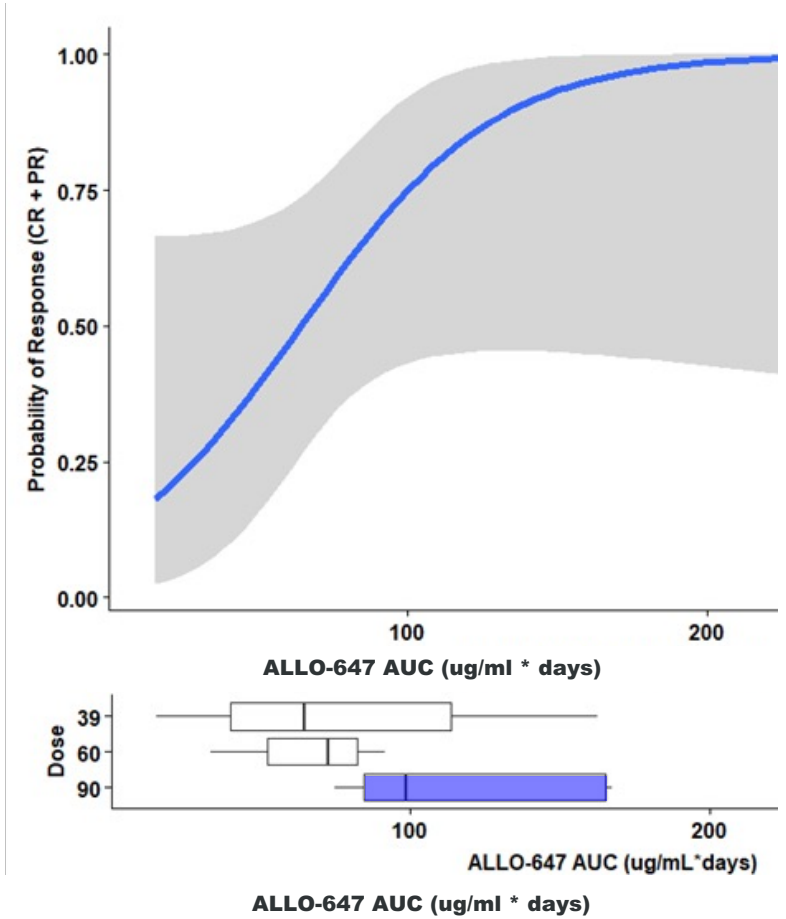
ALLO-647 Improves the Likelihood of Response

ALLO-647 (anti-CD52 mAb) Prevents Premature Rejection of Allogeneic CAR T Cells

- AlloCAR T dosed with standard FC lymphodepletion results in limited response rate and durability
- ALLO-647 + FC (FCA) compared to FC alone* leads to significant CAR T cell expansion
- Data demonstrate dose response relationship between ALLO-647 and likelihood of response and cell expansion



*ASH 2018 Benjamin, R Abstract # 612

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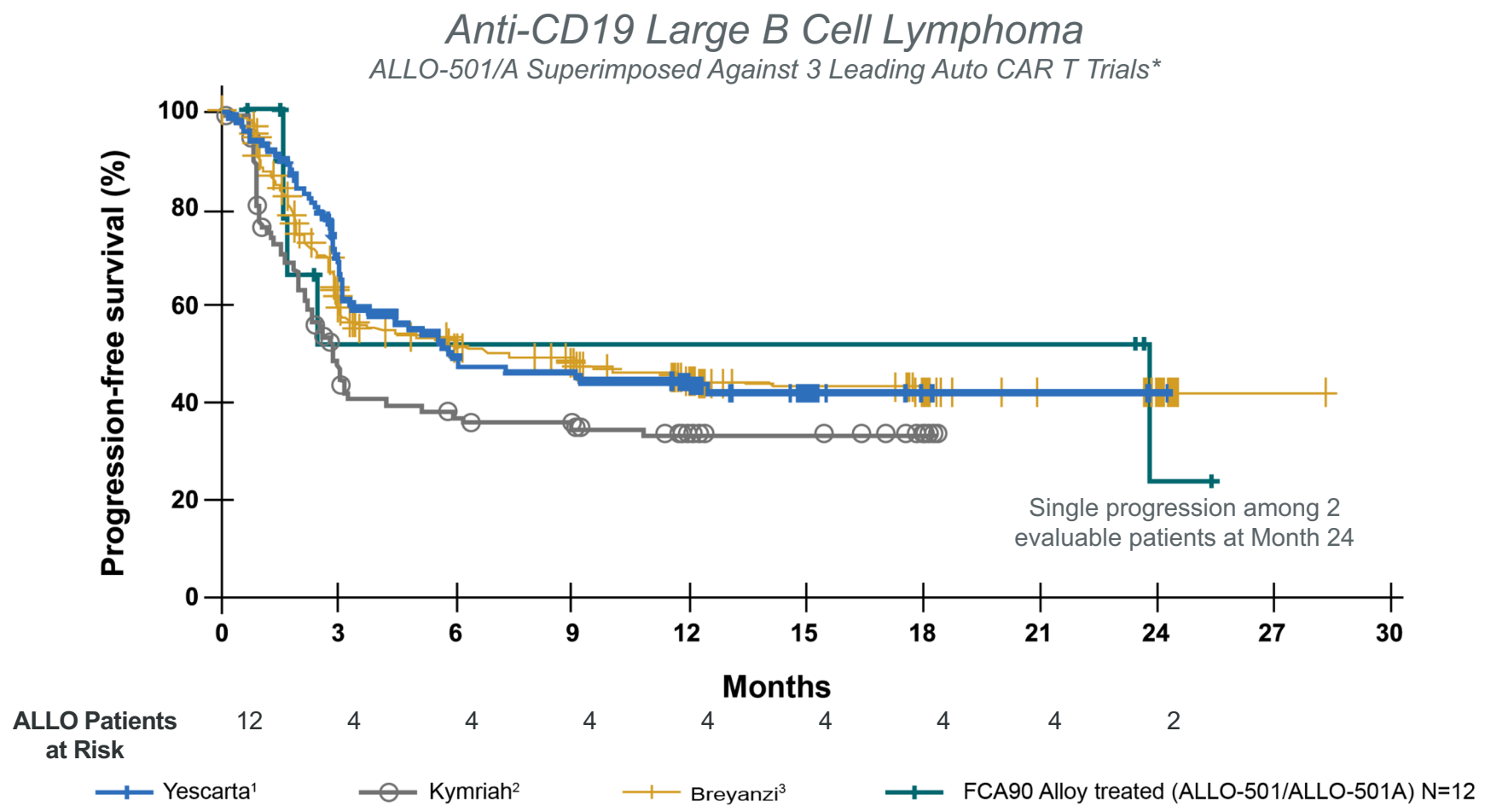
CD19 AlloCAR T: Safety and Efficacy Highly Competitive with Auto CAR T

	All Alloy (n=33)	FCA90 Alloy (n=12)	KYMRIAH®[1] Phase 2 Pivotal	YESCARTA®[2] Phase 2 Pivotal	BREYANZI®[3] Phase 2 Pivotal
ORR	58%	67%	50% (label)	72% (label)	73% (label)
CR in LBCL (mITT)	42%	58%	32% (label)	51% (label)	54% (label)
CR at 6 months in LBCL (mITT)	31%	50%	29%	36%	~ 40%
CRS (Gr 3+)	0%	0%	22%	13%	4%
Neuro Events (Gr3+)	6%	0%	12%	31%	12%
Infection (Gr3+)	15%	8%	20%	23%	19%
n enrolled who did not receive intended cell product	n=3	n=1***	33%**	9%**	36%^

[1] KYMRIAH USPI and Schuster S et al NEJM 2019. Patient population in the label includes: 78% - primary DLBCL not otherwise specified (NOS); 22% DLBCL following transformation from Follicular Lymphoma
[2] YESCARTA USPI and Neelapu, NEJM 2017. Patient population in the label includes: 76% - DLBC; 16% - Transformed Follicular Lymphoma; 8% Primary Mediastinal Large B-cell Lymphoma.
[3] BREYANZI USPI and Abramson, Lancet, 2020. Patient population in label includes: 53% - de novo DLBCL; 25% DLBCL transformed from indolent Lymphoma; 14% high-grade B-cell Lymphoma; 7% Primary Mediastinal Large B-cell Lymphoma; 1% grade 3B Follicular Lymphoma
***Percent of patients who enrolled and did not receive intended cell product including out of spec products*
****After enrollment, one subject was found to have CNS involvement and was excluded*
^Percent who underwent lymphodepletion but did not receive intended cell product including out of spec products
FOR ILLUSTRATIVE PURPOSES ONLY: no head-to-head clinical trial has been conducted. Differences exist between trial designs and subject characteristics, and caution should be exercised when comparing data across studies.

ALPHA/ALPHA2 Data Cutoff Date: October 25, 2022

CD19 AlloCAR T: Only Allogeneic CAR T with PFS Tracking with Autologous CAR T



* **1.** Neelapu SS, et al. *N Engl J Med.* 2017;377:2531-44. **2.** Schuster SJ, et al. *N Engl J Med* 2019;380:45-56. **3.** Abramson JS, et al. *Lancet* 2020; 396: 839-52.

Data Cutoff Date: October 25, 2022

3L+ LBCL Program Intended for Approval of ALLO-501A & ALLO-647

ALPHA2 Phase 2 Study (n=100)

Screening/ Enrollment

Lymphodepletion (d -5 to -3)	Treatment (d0)	Primary EPs
• Flu 30 mg/m2 IV x3 • Cy 300 mg/m2 IV x3 • ALLO-647 90 mg IV	ALLO-501A: single IV infusion of 120M CART cells on day 0	• ORR • CR

EXPAND Phase 2 Study (n=70)

Screening/Enrollment

Active Arm: Lymphodepletion (d -5 to -3)	Treatment (d0)	
• Flu 30 mg/m2 IV x3 • Cy 300 mg/m2 IV x3 • ALLO-647 90 mg IV	ALLO-501A: single IV infusion of 120M CART cells on day 0	**Primary EP** • PFS
Control Arm: Lymphodepletion (d -5 to -3)	**Treatment (d0)**	
• Flu 30 mg/m2 IV x3 • Cy 300 mg/m2 IV x3	ALLO-501A: single IV infusion of 120M CART cells on day 0	

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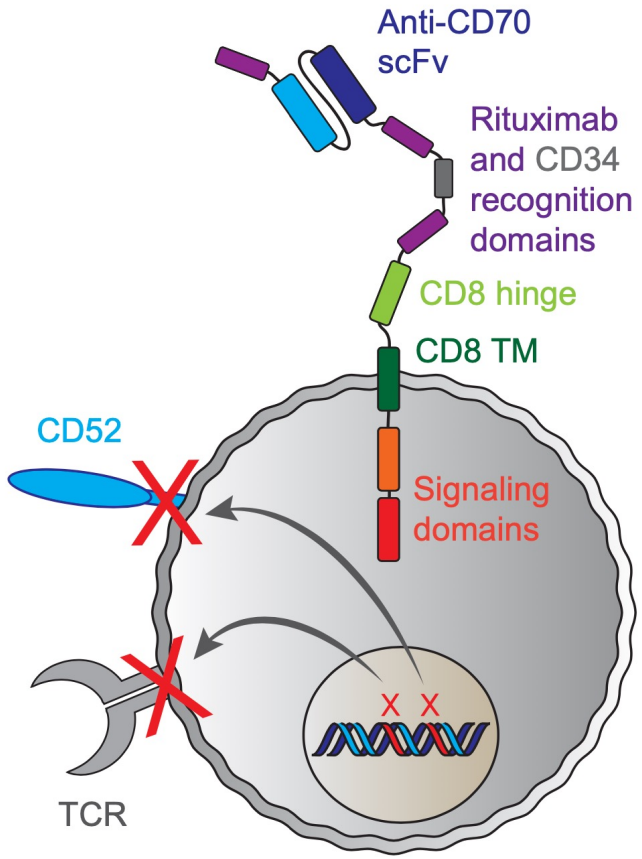
CD70 Program

ALLO-316: A Potentially Best-In-Class Candidate for RCC



ALLO-316 Engineered for Optimal Activity

- "Masking" technology to avoid fratricide during manufacture and to eliminate need for CD70 knock out
- Dagger™ technology aimed at enhancing cell persistence and expansion
- Open field of unmet need
  - Tivozanib approved in 3L+ setting: ORR <20% and mPFS <6mo*

*Tivozanib PI

CD70 Target Selectively Expressed in RCC, Other Tumors

- Phase 1 ongoing in 3L+ RCC, a large indication with unmet need

TRAVERSE Phase 1 Shows Encouraging Activity in CD70+ RCC

- 33% ORR, 100% DCR in patients with established CD70+ expression
- Generally manageable safety profile, no GvHD, 1 Grade 3 DLT

Next Steps

- Establish Phase 2 regimen in ongoing TRAVERSE trial
- Explore other solid tumor and hematologic indications or combination with other anticancer therapies such as immune checkpoint inhibitors

TRAVERSE Data Extract: November 7, 2022

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ALLO-316 TRAVERSE Phase I Trial: Patient Flow

Enrolled (N=19*)

Safety Population (N=17)

Efficacy Population (N=17)

CAR+ T Cell Dose	Lymphodepletion Regimen	
	FCA	FC
40 x 10^6 Cells (DL1)	7	2
80 x 10^6 Cells (DL2)	3	4
120 x 10^6 Cells (DL3)	-	1

* One patient withdrew consent prior to treatment; a second patient was recently enrolled and is pending treatment

- Study enrolled patients with clear cell RCC
  - Patients must have received a checkpoint inhibitor and a VEGF inhibitor in the advanced and/or metastatic setting
  - Patients were heavily pretreated with a median of 3 prior lines of therapy
  - HLA independent dosing (standard for AlloCAR T™)
- Generally manageable safety profile
  - No GvHD
  - One dose limiting toxicity of Gr3 in DL2 FCA
  - CRS was all low grade with the exception 1 Gr3
  - Neurotoxicity was low grade and reversible and seen in only 3 (18%) of patients

Data Extract: November 7, 2022

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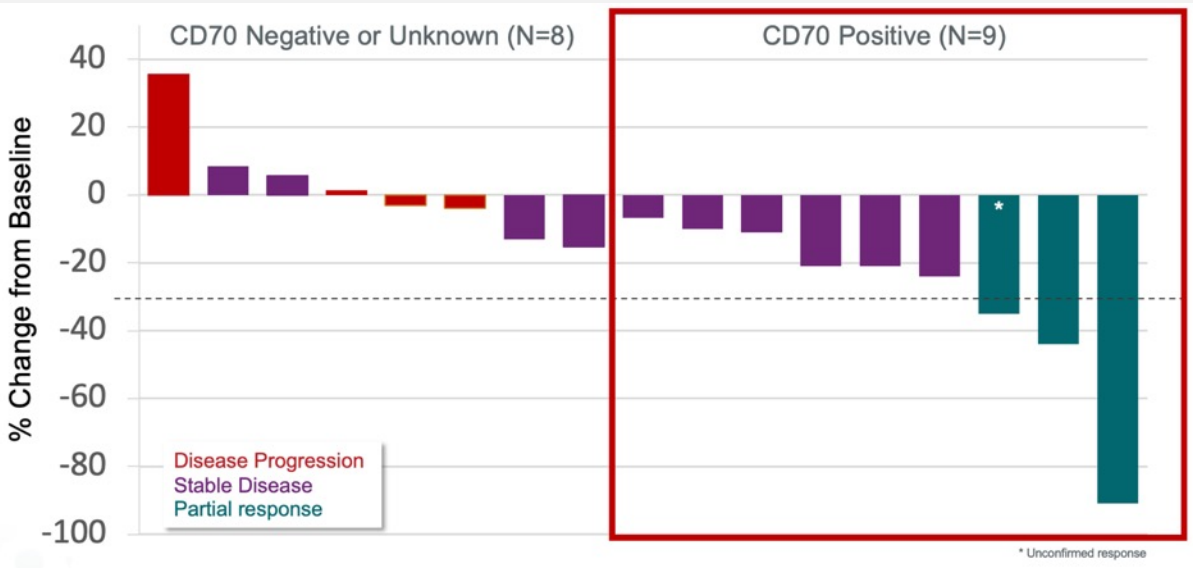
ALLO-316: Demonstrates feasibility of an AlloCAR T to Treat Solid Tumors

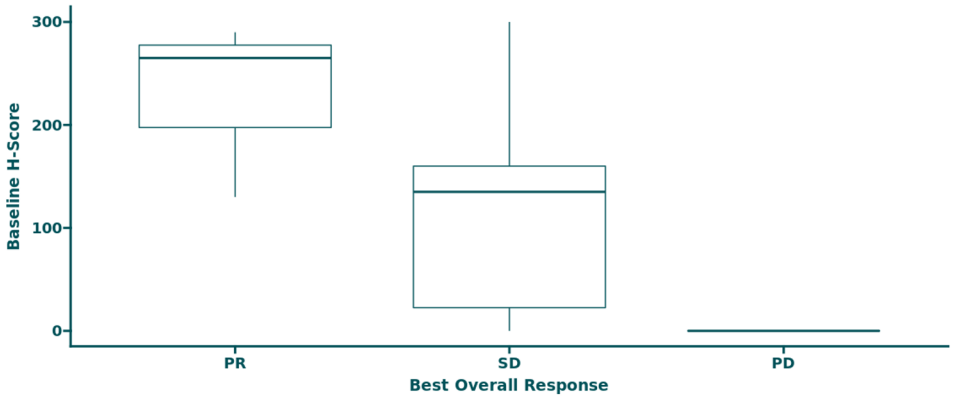
TRAVERSE continues to explore cell dose and lymphodepletion regimen in CD70 positive RCC patients

Preliminary Data Indicates ALLO-316 Made CD70+ Tumors Shrink



Response Rates Correlate with CD70 Expression

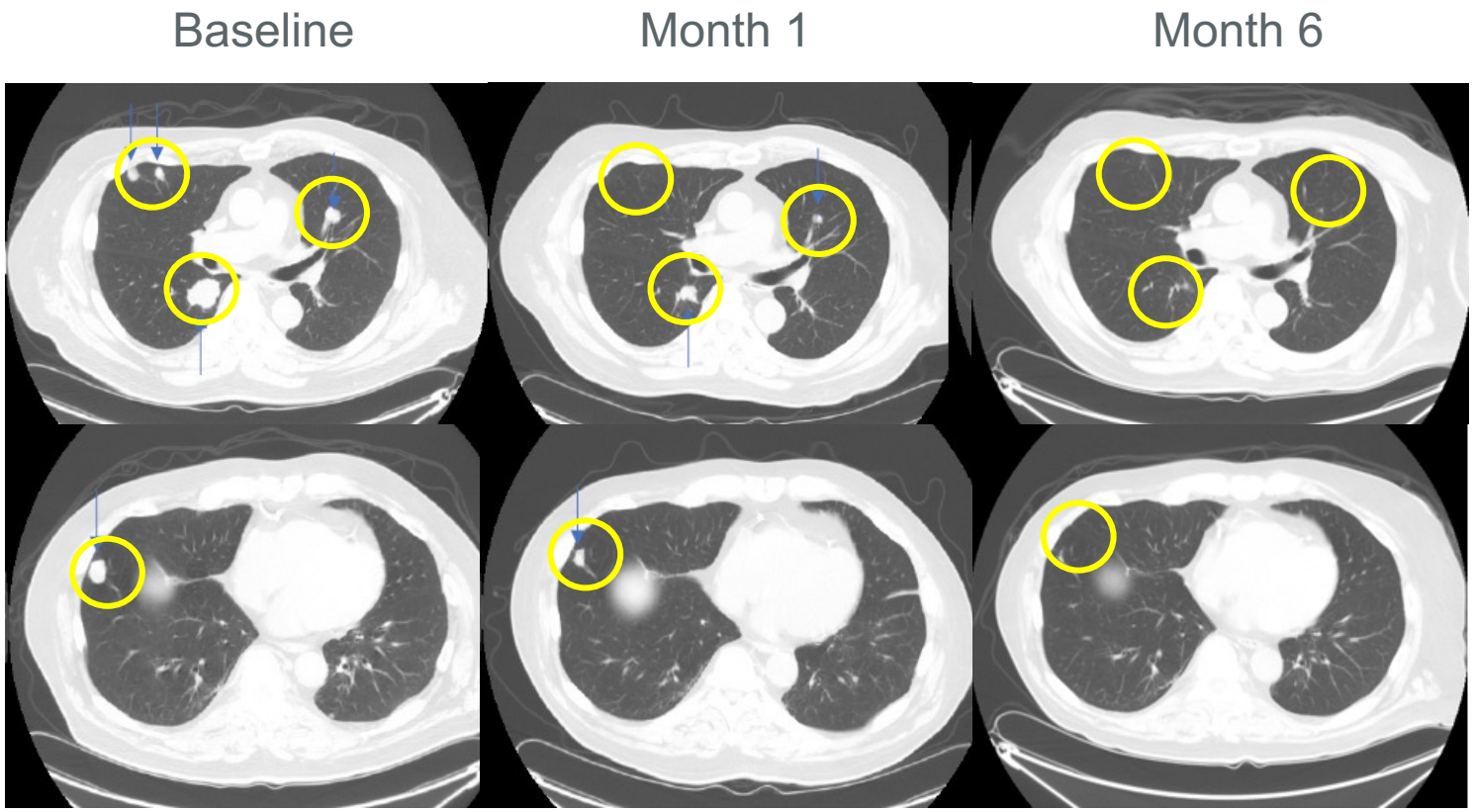
- 18% ORR and 82% disease control rate (DCR) across all patients
- 33% ORR and 100% DCR in patients with known CD70+ expression



* Response rates include two confirmed and one unconfirmed responses; median follow-up time of 5.4 months
† H-Score is the weighted CD70 expression on a scale of 0-300; H-score = CD70 intensity x % positivity

Data Extract: November 17, 2022

ALLO-316 Case Study: Durability with Deepening Response



Partial Response

- 68-year-old man with metastatic RCC to the lungs, refractory to checkpoint blockade, angiogenesis inhibitors
- Treated with FCA and 40M CAR+ cells
- Responded with initial partial response at Month 1 that continued to deepen through Month 6
- Demonstrates durability of response with ALLO-316

Data Extract: November 7, 2022

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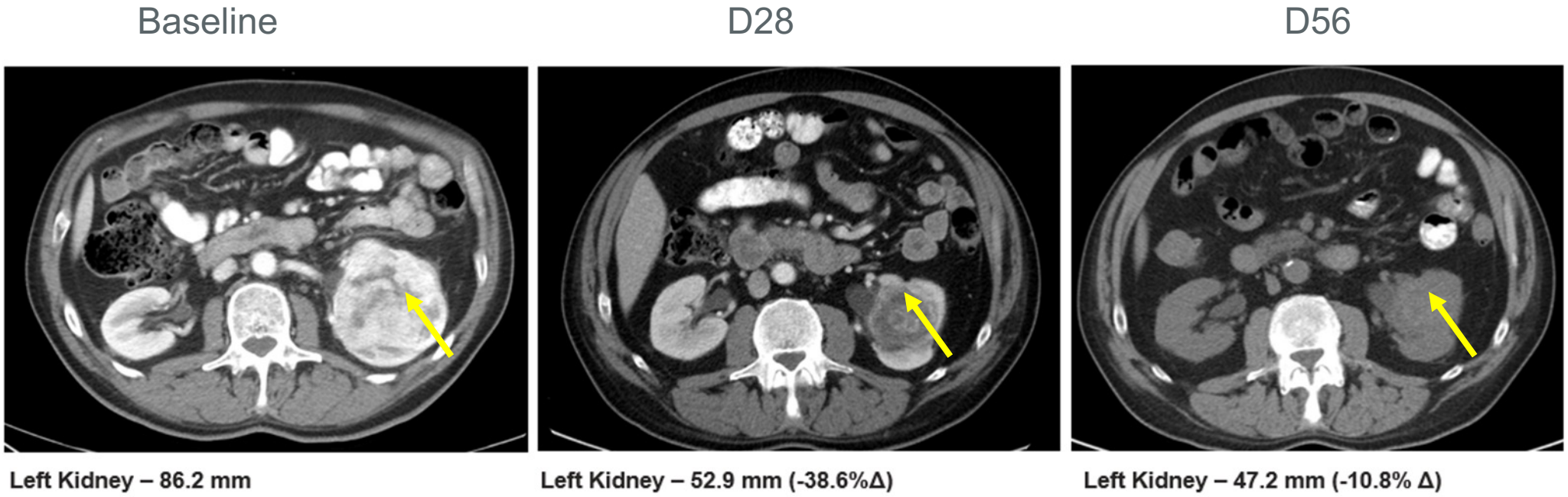
Case Study: ALLO-316 Can Target Primary Renal Tumors

Patient had Stable Disease with 45% decrease in left kidney tumor



Stable Disease

- 70-year-old male with metastatic RCC to the kidney, adrenal and bone, refractory to checkpoint blockade, angiogenesis inhibitors
- Treated with FCA and 80M CAR+ cells

Data Extract: November 7, 2022

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CD70 Dagger™ Technology

Dagger™: A Next-Gen Approach for Improved Cell Expansion

Deploying CD70 Dagger™ Tech To Control Immune Rejection

- Dagger™ Platform takes advantage of CD70 on activated host T cells to enhance CAR T cell expansion and persistence
- CAR T cells armed with Dagger™ receptors can eradicate alloreactive host T cells *in vitro*, and may reduce host rejection *in vivo*

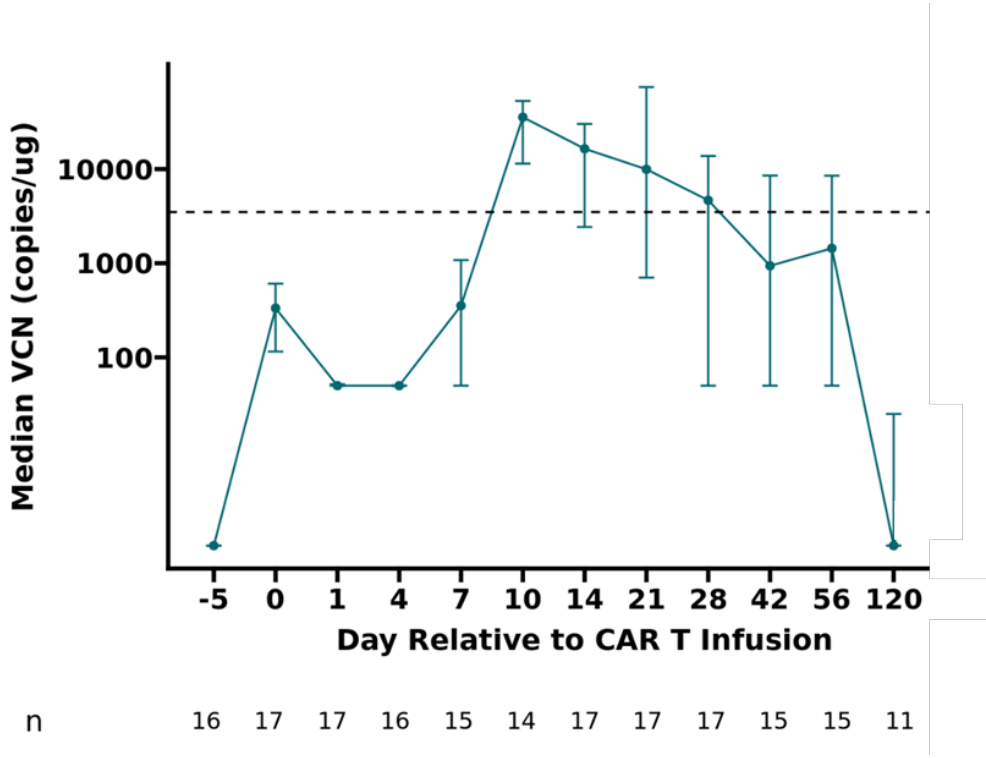
ALLO-316 Phase I Data Provides Proof-of-Concept

- Robust CAR T expansion observed in TRAVERSE study
- CAR T persistence observed with and without ALLO-647 dosing - may enable de-intensification of lymphodepletion

Dagger™ Platform: Potentially Foundational

- Proprietary approach to engineering other AlloCAR T products with CD70 Dagger™ to enhance clinical profile
- Next-generation candidates in development

TRAVERSE Study
Median VCN through D120



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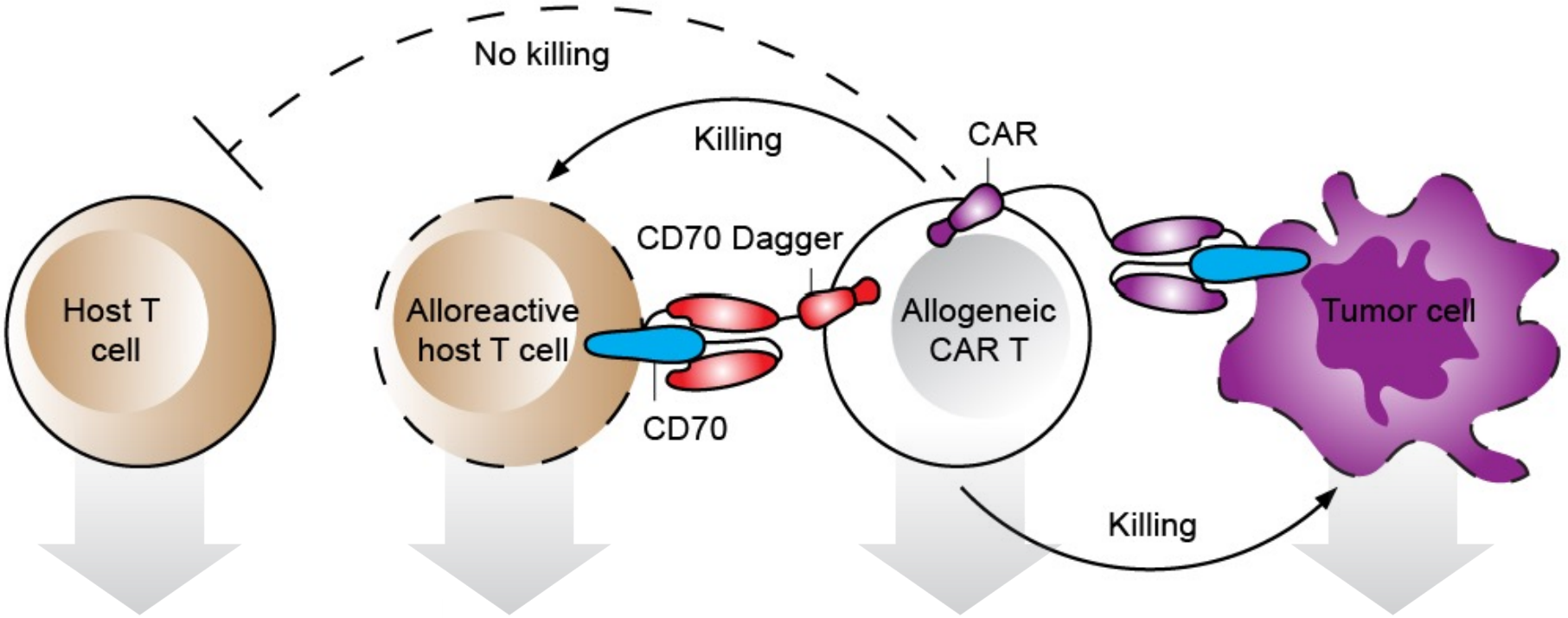
Dagger™ Mechanism Specifically Targets Alloreactive Host T Cells

Deploys Anti-CD70 to Protect AlloCAR T Cells from Immune Rejection



Other T cells that are not activated are left unharmed

Alloreactive host T cell is killed

CAR T cells kill host T cells and proliferate instead of being rejected

CAR T cell expansion leads to enhanced tumor elimination

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BCMA Program

ALLO-715: First & Only Allogeneic CAR T Study to Establish Proof-of-Concept in MM

BCMA Program Evolution

Established Proof-of-Concept

- First AlloCAR T to establish responses in myeloma comparable to an approved autologous CAR T therapy

Manufacturing

- Reviewing opportunity to improve manufacturing processes across BCMA candidates for optimal performance

Next Steps

- ALLO-715 Phase 1 complete
  - Data published in *Nature Medicine*
- ALLO-605 TurboCAR™ in process optimization (IGNITE trial)

ALLO-715 UNIVERSAL Trial

Expansion Cohort Demonstrated Deep and Durable Responses

- Single Infusion of 320M CAR+ cells with FCA60 Lymphodepletion Resulted in 67% ORR and 42% VGPR+
  - 100% of VGPR+ Patients Minimal Residual Disease
  - Median DOR of 9.2 months

Manageable Safety Profile Across All Doses:

- No GvHD
- Low-grade and reversible neurotoxicity; one Gr 2 ICANS
- Low-grade CRS with only one Gr 3
- Low use of tocilizumab (32%) and steroids (25%)

Treatment within 5 Days of Enrollment; No Bridging Therapy

- 92% of enrolled patients received product
- 100% of infused product manufactured & released per product specifications

Data Cutoff Date: October 11, 2022; 5 patients excluded from efficacy analysis have best response range from SD to PR

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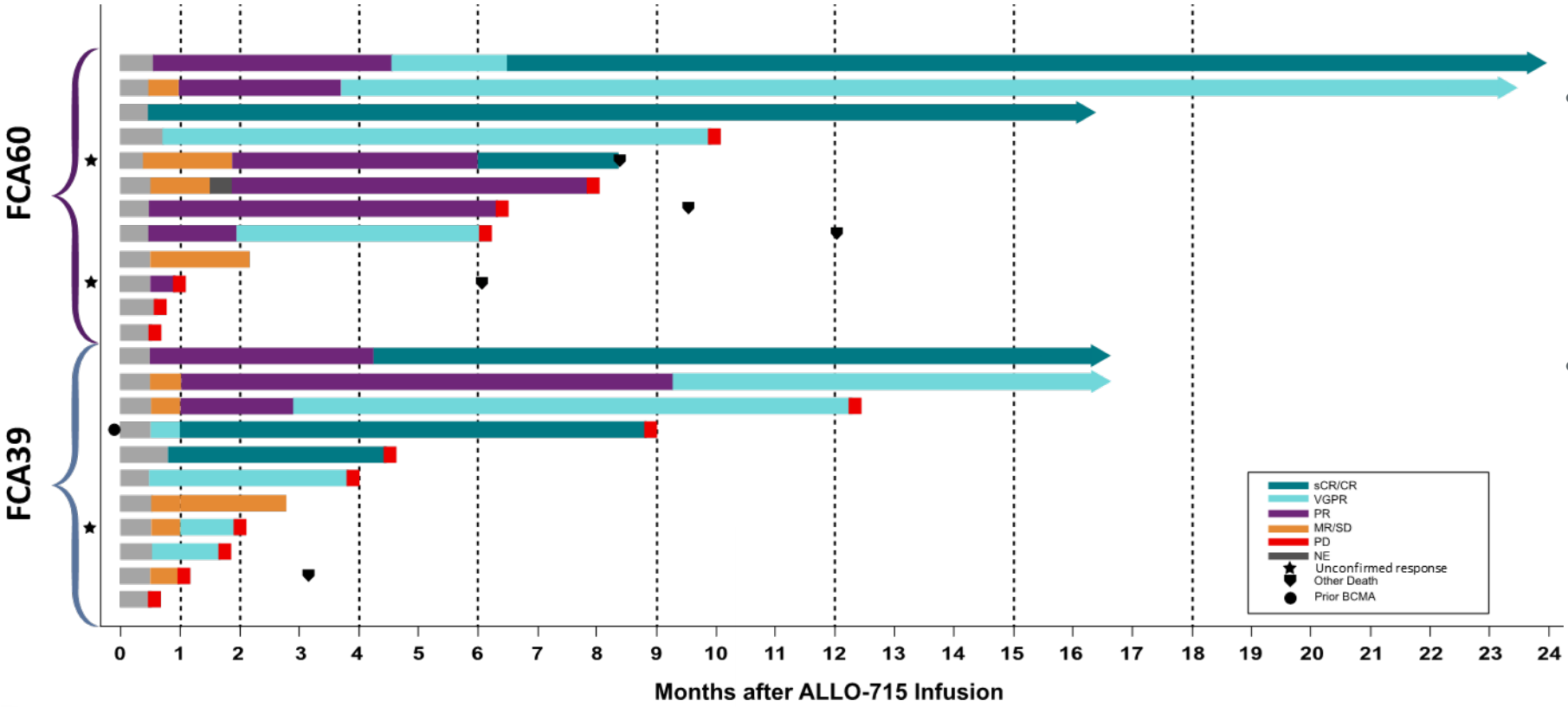
ALLO-715 Expansion Cohort Shows Durable Responses



- In FCA60 efficacy evaluable set, the median DOR was 9.2 months with the longest ongoing response at 24 months
- Responses were seen across all subgroups including patients with high-risk cytogenetics and extra medullary disease

* Two subjects had responses of PR which were never confirmed; one of them is categorized as best response PD and the other as best response SD. One subject had a response of VGPR which was never confirmed and is categorized as a best response of PR.

Data Cutoff Date: October 11, 2022

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A Single Dose of ALLO-715 Has Potential to Address Patient Need

Treatment Administration and Efficacy (mITT)	ALLO-715 (320M & FCA60) n=12[1]	Tecvayli (teclistamab)[2]	Abecma® (Ide-cel)[3]	Carvykti (Cilta-cel)[4]
ORR (mITT)	**67%**	62%	72%	98%
VGPR+ Rate (mITT)	**42%**	57%	53%	95%
CR/sCR Rate (mITT)	**17%**	28%	28%	78%
MRD[5]- in VGPR+	**100%**	69%	75%	92%
Duration of Response (median)	**9.2 mo[6]**	Not reached	11.0 mo	21.8 mo
CRS (Gr3+)	**0%**	< 1%	9%	5%
Neurologic Toxicity (Gr3+)	**0%**	2.4%	4%	11%
Infection (Gr3+)	**35%**	39.2%	26%	27%
Grade 5 Adverse Events	**6%**	5%	6%	9%
% enrolled who did not receive intended cell product[7]	**11%**	Discontinuation (AE) 1.2% Dose interruption (AE) 73%	26%	29%
Days to treatment initiation[8]	**5**	Not reported	33	32
Required bridging therapy	**0%**	NA	87%	75%

[1] data through 11 Oct 2022; [2] Tecvalyi USPI and Usmani, 2021; [3] Abecma USMI and Munshi, 2021; [4] USPI and Berdeja, 2021; [5] For UNIVERSAL, MRD status is evaluated in subjects with VGPR+; for Tecvayli, MRD is reported in 26 subjects with CR or better; for Abecma, MRD is reported among subjects with CR or sCR; [6] 5 subjects remain in response between 17 and 24 months; [7] cell product that is successfully manufactured and meets release specifications; for Abecma 11 patients did not receive treatment and 24 patients received out of specification product; for Carvykti, 16 patients did not receive Carvykti due to progressive disease and 17 patients received out-of-specification product; [8] for ALLO-715, time from enrollment to start of lymphodepletion. Two patients were not treated due to rapidly progressing disease; for Abecma, time from apheresis to cell product availability (includes 87% of patients who received bridging therapy)
FOR ILLUSTRATIVE PURPOSES ONLY: no head-to-head clinical trial has been conducted. Differences exist between trial designs and subject characteristics, and caution should be exercised when comparing data across studies.

Data Cutoff Date: October 11, 2022

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Realizing the Potential of Allogeneic CAR T through Innovation and Execution

Our goal is to make CAR T available to all patients in need

CD19 *Best & First-in-Class Profile*

ALLO-501A

- First potentially pivotal Ph2 trial
- 67% ORR and 58% CR rate with single dose and FCA90 lymphodepletion
- Durability moves the field beyond proof-of-concept and validates Allogene's platform

50%

CR at 6 and 12 months

BCMA *Potential First-in-Class*

ALLO-715

- First & only allogeneic CAR T trial to demonstrate potential in MM
- Expansion cohorts deliver response rates that support advancement
- Reviewing manufacturing process improvements across BCMA candidates for optimal performance

9.2 months

mDOR

24 months

Longest Ongoing Response

CD70 *Expanding into Solid Tumors*

ALLO-316

- Demonstrates feasibility of an allogeneic CAR T directed at CD70 to treat RCC
- Induced Anti-Tumor Activity in Patients with CD70 Expressing RCC with Deepening Responses Over Time

33%

ORR

100%

DCR

CD70+ Patients

CD19 Data Cutoff Date: October 25, 2022; ALLO-715 Data Cutoff Date: October 11, 2022, ALLO-316 Data Extract: November 7, 2022

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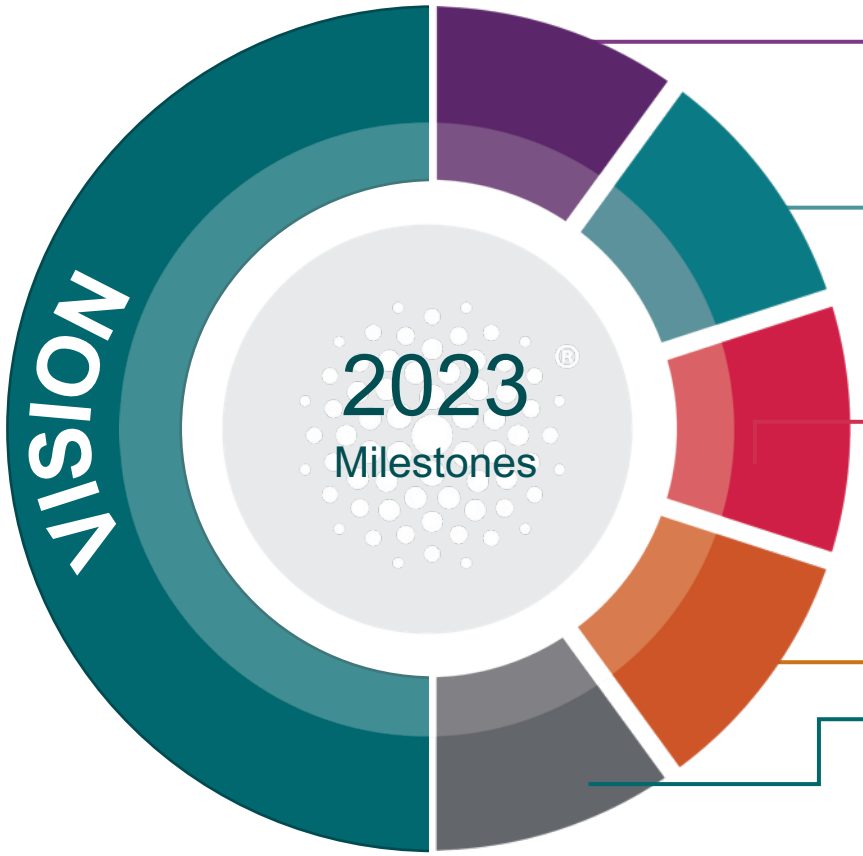
2023 Executing Toward An Allogeneic CAR T Future



1H: Initiate EXPAND trial in support of potential approval of ALLO-647 in 3rd- line LBCL

2H: Provide BCMA program update

2H: ALLO-316 Phase 1 update in refractory RCC

2H: ALLO-501A: complete Phase 3 trial readiness for earlier line LBCL

2H: ALLO-501A: longer-term follow-up from Phase 1 trial in 3rd Line LBCL

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