R&D Showcase

Leading the Revolution from CAR T Therapies to CAR T Products

November 29, 2022

Legal Disclaimers

To the extent statements contained in this Presentation are not descriptions of historical facts regarding Allogene Therapeutics, Inc. ("Allogene," "we," "us," or "our"), they are forward-looking statements reflecting management's current beliefs and expectations. Forward-looking statements are subject to known and unknown risks, uncertainties, and other factors that may cause our or our industry's actual results, levels or activity, performance, or achievements to be materially different from those anticipated by such statements. You can identify forward-looking statements by words such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "will," "would" or the negative of those terms, and similar expressions that convey uncertainty of future events or outcomes. Forward-looking statements contained in this Presentation include, but are not limited to, statements regarding: the timing and ability to progress the ALPHA2, UNIVERSAL, IGNITE and TRAVERSE trials; the timing and ability to initiate the EXPAND trial for ALLO-647; clinical outcomes, which may materially change as more patient data become available; the ability to manufacture AlloCAR T™ products, including obtaining FDA allowance to use material manufactured at the Company's manufacturing facility for use in any clinical trial; the projection related to the number of AlloCAR T doses that can be produced at Cell Forge 1 at scale on an annual basis; the potential benefits of AlloCAR T. Various factors may cause material differences between Allogene's expectations and actual results as discussed in greater detail in Allogene's filings with the Securities and Exchange Commission (SEC), including without limitation in its Form 10-Q for the quarter ended September 30, 2022.

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.

Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. This Presentation shall not constitute an offer to sell or the solicitation of an offer to buy securities, nor shall there be any sale of securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

David Chang, M.D., Ph.D.

Allogene: From Vision to Vial

Allogene THERAPEUTICS

The Birth of an Industry

Allogeneic

2016
First allogeneic CAR T clinical trial initiated (UCART19 in ALL)

First CRISPR gene-edited CAR T therapy (NHL)

2017
Allogene Therapeutics launched

2022
Allogene initiates first potentially pivotal Ph2 trial in NHL

Autologous

2009
First patient dosed with CD19 autologous CAR T

2010-13
Seminal papers report complete responses with CD19 autologous CAR T

2017
FDA approves first autologous CAR T for ALL & NHL

KYMRIAH® (tisagenlecleucel) Suspension for IV infusion

YESCARTA® (axicabtagene ciloleucel) Suspension for IV infusion

2021
FDA approves first autologous CAR T for multiple myeloma

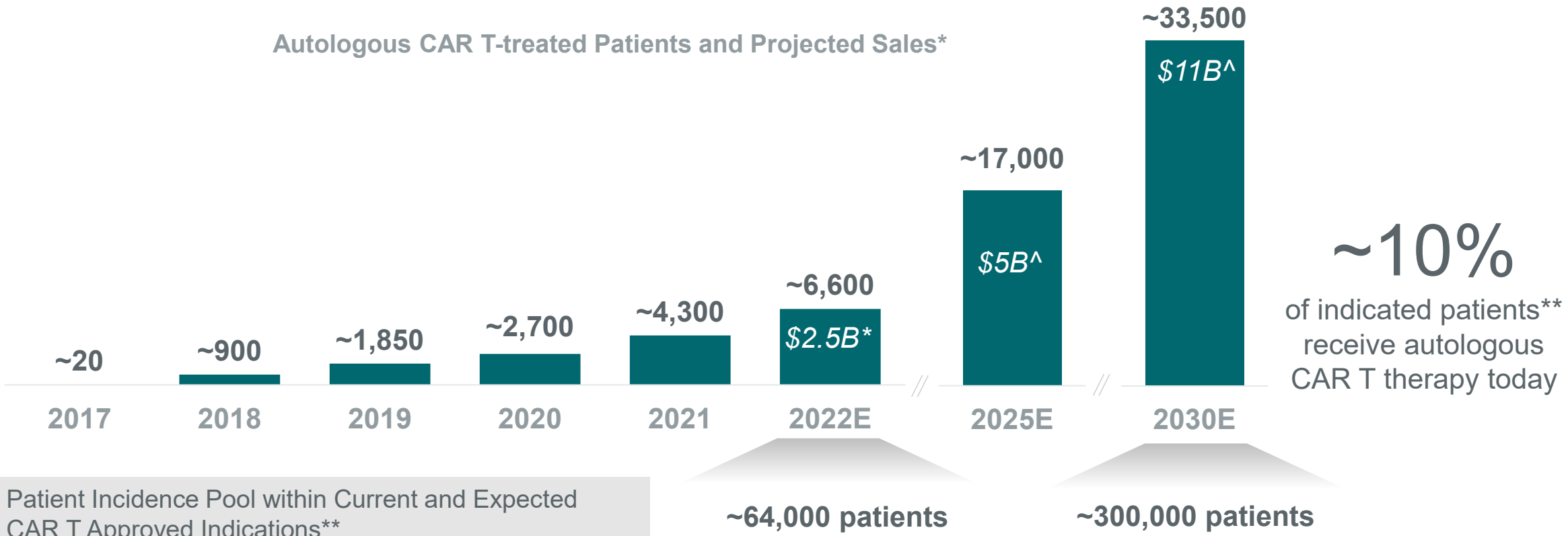
Abecma® (idecabtagene vicleucel) Suspension for IV infusion

2022
5 approved autologous CAR T therapies across multiple heme indications

~ $2.5 billion in CAR T revenue expected

Allogene THERAPEUTICS

“Off-the-Shelf” Democratization of CAR T Needed to Address Growing Demand



*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

Recent Survey Unveils Real-World Access Challenges

82%

Agree CAR T therapies have changed how they manage aggressive cancers

Extensive wait times and manufacturing limitations keep many eligible patients from receiving treatment – **even in high volume centers**

Of eligible patients who can wait for manufacturing

50%

receive an autologous CAR T therapy

Of eligible CAR T patients

12%

receive treatment within one month

~40%

wait 3-6+ months to receive treatment

For eligible patients,

disease progression

manufacturing capacity

and **comorbidities**

were the top reasons for not receiving CAR T

2022 Survey sponsored by Allogene and conducted by an independent third-party research organization of 50 U.S.-based hematologist-oncologists, physician assistants, nurse practitioners, and registered nurses from academic centers with CAR T therapy capabilities

Allogene THERAPEUTICS

Allogene: On a Mission for Patients

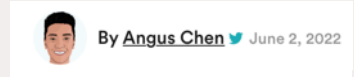
Our mission is to create and lead the next revolution in cancer treatment by delivering to patients the first allogeneic CAR T cell (AlloCAR T™) products for blood cancers and solid tumors

STAT

SPECIAL REPORT

How do you decide?

Cancer treatment's CAR-T crisis has patients dying on a waitlist



By Angus Chen June 2, 2022

PharmaVoice
@PharmaVoice

Access to CAR-T cell therapies is being hindered by manufacturing bottlenecks, leading some in the industry to push for next generation of "off-the-shelf" therapies.

Leaders at @AllogeneTx and @MoffittNews discuss the impacts on industry and patients.

pharmavoice.com
While CAR-T wait times remain 'heartbreaking,' researchers push for innovatio...
Facing an unprecedented manufacturing bottleneck, a new coalition is aiming to create the next generation of CAR-T therapies.

7:54 AM · Nov 8, 2022 · Twitter Web App

Allogene THERAPEUTICS

Allogene: Creating the Allogeneic Cell Therapy Playbook

5 Foundational platform technologies

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

Cell Forge 1

>175 Patients treated

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

~350 employees

defining the field and writing the allogeneic CAR T playbook

$637 million

in cash, cash equivalents and investments as of September 30, 2022

1

singular focus on allogeneic cell therapy

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

*Based upon publicly-reported patient data

Allogene THERAPEUTICS

Engine for Innovation, Execution and Growth

- Allogene brings together **first movers** in the success of autologous CAR Ts, pioneers in allogeneic technology, and a deep bench of functional leaders experienced in innovative drug development

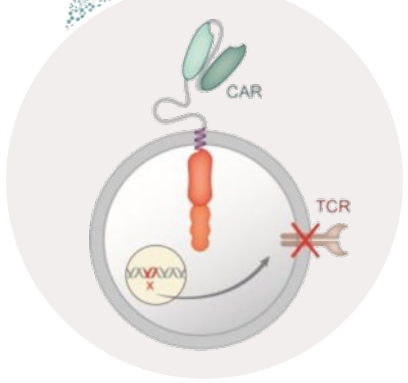
- **5 product candidates** to the clinic
- **7 clinical trials** across 40 centers
- **>175 patients** treated
- **2 RMAT** designations

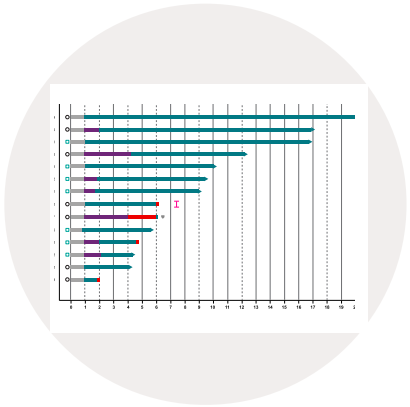
- Fueling **Next Generation Technologies**
- **Critical mass of data** ~ 5.7 terabytes of enterprise-wide AlloCAR T data creates **insight advantage** across the platform

- **Deep** GMP processes understanding
- **Cell Forge 1** manufacturing facility
- **Highly characterized** drug product
- **20K** potential doses per year at scale

Allogene THERAPEUTICS

The Keys to Unlocking Allogeneic CAR T Potential

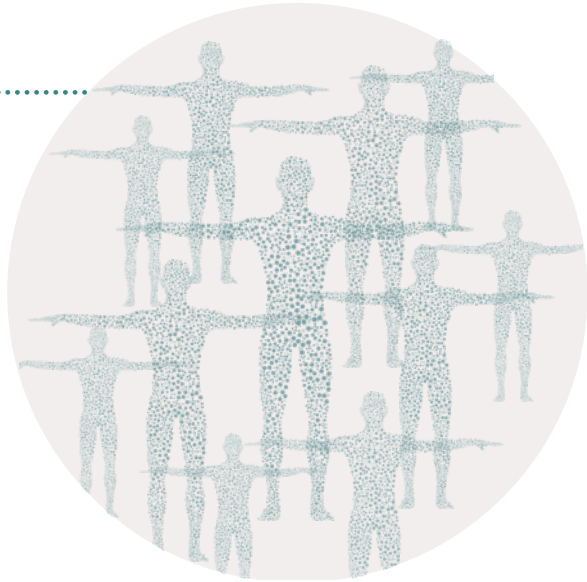




>175 patients

40 centers

7 clinical trials



Safety & Feasibility

Gene-editing was successfully deployed to address safety questions relating to GvHD

Durability

Proprietary platform demonstrates durable responses are achievable using optimized lymphodepletion

Scalability

Advanced integrated capability including internal quality and characterization

Execution

Dosed nearly as many patients with an allogeneic CAR T as key competitors combined* yielding industry-leading translational insight

Addressability

- Proven on-demand treatment
- Industry's first Phase 2 trial with ALLO-501A
- Competitive profile and path to Phase 2 with ALLO-715
- Proof-of-principle in solid tumors with ALLO-316

*Based upon publicly-reported patient data

Allogene THERAPEUTICS

Deep & Advancing Hematologic AlloCAR T Pipeline

Target	Program	Trial name	Study population	Discovery	IND-enabling	Phase 1	Phase 2[1]	Approved	Designation	Next milestone
CD19	ALLO-501A	ALPHA2	3+ Line LBCL						FTD RMAT	Target enrollment completion 1H 2024
CD19	ALLO-501A	ALPHA3	2+ Line LBCL							Ph2 readiness in 2023
CD19	ALLO-501A + ALLO-647[2]	EXPAND	3+ Line LBCL							Initiation activities underway
CD19	CD19 - Next Generation									
BCMA	ALLO-715	UNIVERSAL	5+ Line MM						RMAT ODD	Preparing for Ph2
BCMA	ALLO-605[3]	IGNITE	5+ Line MM						FTD ODD	Re-open enrollment
CD70	ALLO-316		Heme Malignancies							
FLT3	ALLO-819		AML							

[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™

Allogene THERAPEUTICS

Potential Across Broad Solid Tumor Directed AlloCAR T Pipeline

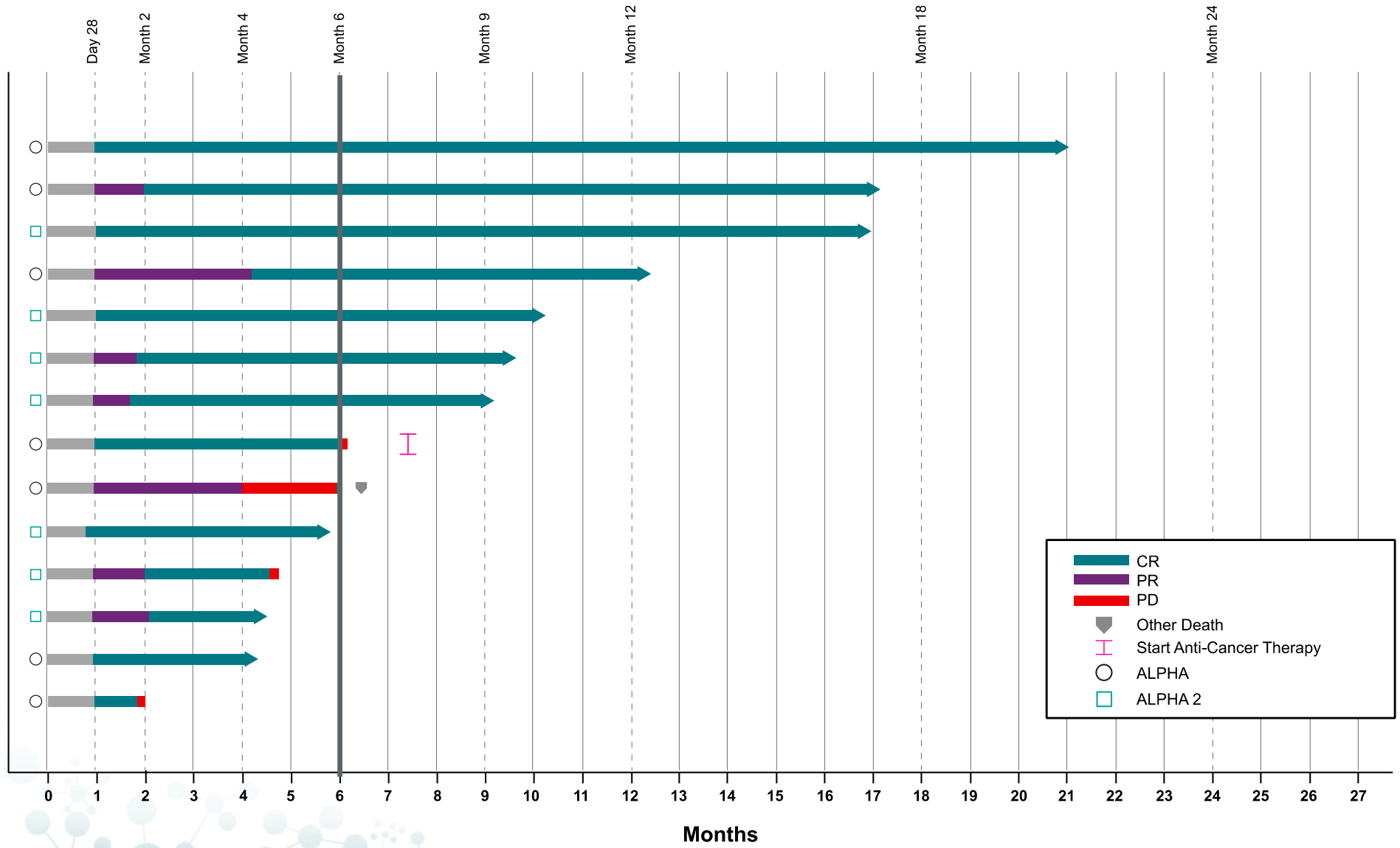
Target	Program	Trial name	Study population	Discovery	IND-enabling	Phase 1	Phase 2[1]	Approved	Designation	Next milestone
CD70	ALLO-316	TRAVERSE	ccRCC						FTD	Cohort expansion 1H 2023
CD70	ALLO-316		Basket Study							Determine histologies for inclusion
DLL3	ALLO-213		SCLC							
Claudin 18.2	ALLO-182		Gastric & Pancreatic Cancer							
	7 undisclosed targets									

[1]Phase 3 may not be required if Phase 2 is registrational

What We Will Talk About Today

- CD19 Program
  - ALLO-501A can achieve deep, durable responses, has best-in-class potential
  - Proprietary ALLO-647 platform improves clinical outcomes
  - Selection process for optimized Phase 2 dosing regimen
- BCMA Program
  - ALLO-715 demonstrates activity on par with approved BCMA-directed therapies
  - Preparation underway for a potentially pivotal Phase 2 trial
- CD70 Program
  - Initial proof-of-concept data for ALLO-316 in renal cell carcinoma
  - CD70 expression profiling to select patients most likely to respond
  - Dagger™ Technology, a next generation allogeneic platform based on CD70 biology

ASH 2021: LBCL Patients Who Achieved a Complete Response

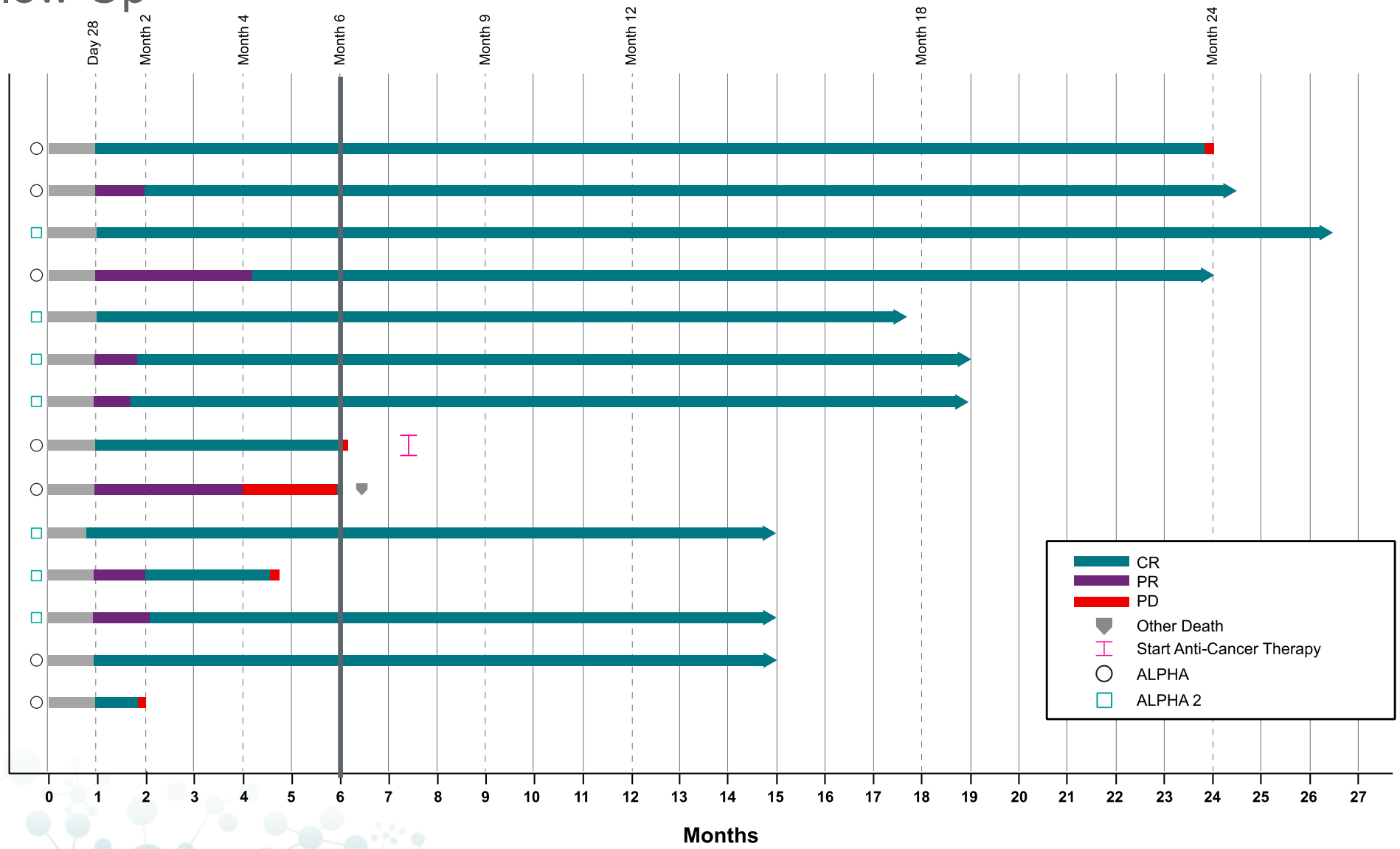


10 of 14 patients were in ongoing CR

Data Cutoff Date: October 18, 2021

Allogene THERAPEUTICS

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



9 of 14 patients in ongoing CR

Data Cutoff Date: October 25, 2022

Allogene THERAPEUTICS

R&D Showcase Agenda

Topic	Speaker	Time (ET)
Allogene: From Vision to Vial	**David Chang, M.D., Ph.D.** Chief Executive Officer, President and Co-Founder of Allogene	1:00 – 1:10
Hematologic Franchise		
Charting the Course for Allogeneic Cell Therapies in Hematology	**Rafael Amado, M.D.** Executive Vice President, R&D of Allogene	1:10 – 1:20
The ALPHA Trials (ALLO-501/ALLO-501A)	**Frederick Locke, M.D.** Chair, Department of Blood & Marrow Transplant and Cellular Immunotherapy; program co-leader, Immuno-Oncology, Moffitt Cancer Center	1:20 – 1:35
The UNIVERSAL Trial (ALLO-715)	**Adriana Rossi, M.D.** Assistant Professor Hematology and Medical Oncology; Co-Director CAR T and Stem Cell Transplant Center, The Mount Sinai Hospital	1:35 – 1:45
Panel: Investigator Insight **Moderator: Rafael Amado, M.D.**	• **Herbert Eradat, M.D.** Internal Medicine Specialist, Ronald Reagan UCLA Medical Center and UCLA Santa Monica Medical Center • **Frederick Locke, M.D.** • **Nikhil C. Munshi, M.D.** Professor, Medical Oncology, Dana-Farber Cancer Institute • **Adriana Rossi, M.D.**	1:45 – 2:10
The ALLO Manufacturing Difference	**Alison Moore, Ph.D.** Chief Technical Officer of Allogene	2:10 – 2:20
The AlloCAR T Product Opportunity	**Eric Schmidt, Ph.D.** Chief Financial Officer of Allogene	2:20 – 2:30

Allogene THERAPEUTICS

R&D Showcase Agenda (cont.)

Topic	Speaker	Time (ET)
BREAK		10 min
The Next Frontier: Advancing CAR T into Solid Tumors		
Bringing AlloCART to Solid Tumors	**Barbra Sasu, Ph.D.** Chief Scientific Officer of Allogene	2:40 – 2:50
ALLO-316: The TRAVERSE Trial	**Ritesh Kotecha, M.D.** Assistant Attending Physician, Memorial Sloan Kettering Cancer Center	2:50 – 3:05
Panel: AlloCAR T for RCC **Moderator: David Chang, M.D., Ph.D.**	• **Arie Belldegrun, M.D.** Executive Chairman and Co-Founder of Allogene Director & Founder, UCLA Institute of Urologic Oncology; Professor of Urology, Research; Chief, Division of Urologic Oncology, Emeritus, David Geffen School of Medicine, UCLA Health • **Malcolm K. Brenner, M.D., Ph.D.** Founding Director, Center for Cell and Gene Therapy, Baylor College of Medicine • **Ritesh Kotecha, M.D.** • **Robert J. Motzer, M.D.** Section Head, Kidney Cancer, Genitourinary Oncology Service; Jack and Dorothy Byrne Chair in Clinical Oncology, Memorial Sloan Kettering Cancer Center	3:05 – 3:30
Executing on Our Vision	**David Chang**	3:30 – 3:35
Q&A (LIVE)	**Moderator: David Chang**	3:35 – 4:00

Rafael Amado, M.D.

Charting the Course for Allogeneic Cell Therapies in Hematology

Allogene THERAPEUTICS

Engine for Innovation, Execution and Growth

- **5 product candidates** to the clinic
- **7 clinical trials** across 40 centers
- **>175 patients** treated
- **2 RMAT** designations

Allogene THERAPEUTICS

Evolution of ALLO-501A Program in NHL

ALPHA Trial (ALLO-501)

ALPHA2 Phase 1 Study

ALPHA2 Phase 2 Study

Expansion to Earlier Lines and Other Histologies

Establish Proof of Concept

- No evidence of Graft vs. Host Disease
- Safe and effective lymphodepletion
- Cell expansion and initial signs of efficacy

ASH 2021

Validate Platform & Enhance Profile

- Optimal lymphodepletion and cell dosing established for Phase 2
- Improved manufacturing process
- Demonstrated durability of responses

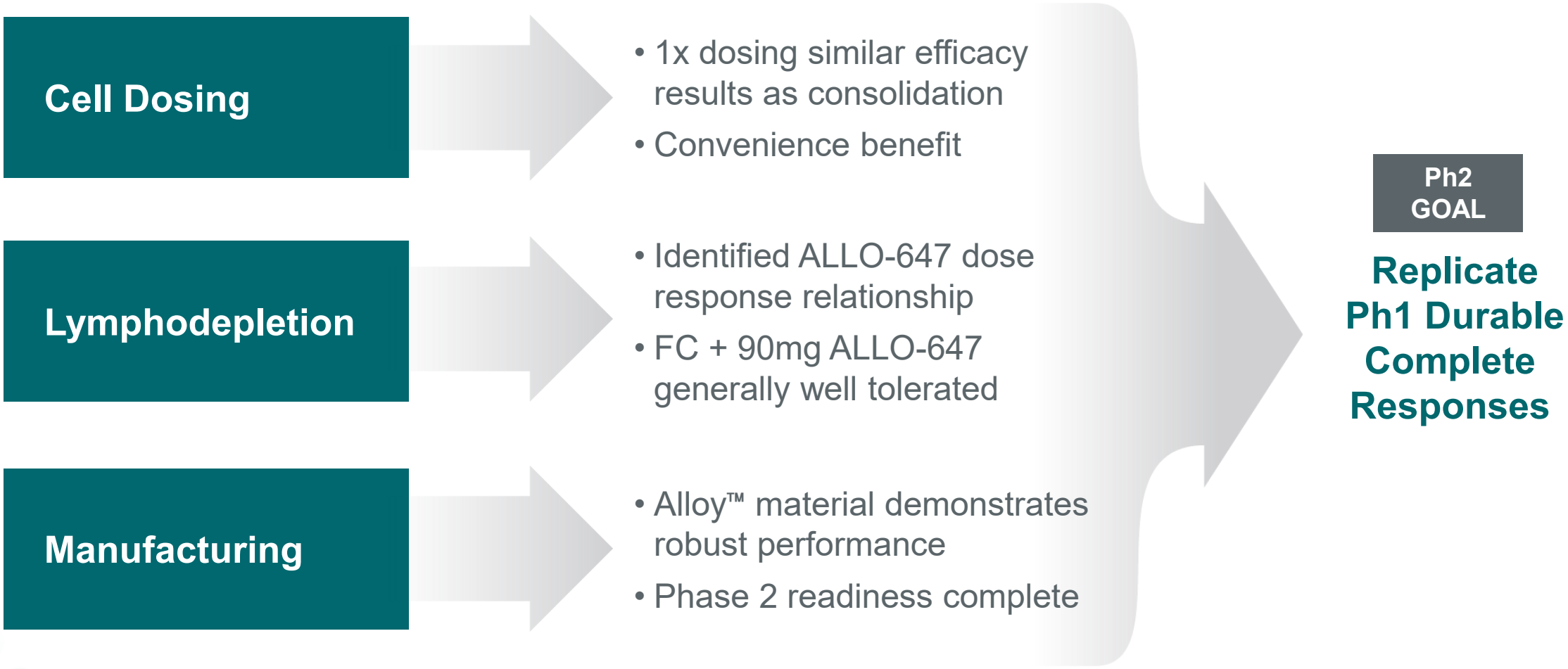
Today

Launch & Expand Indications

- Prepare BLA submission
- Scale manufacturing to meet demand
- Execute broad development plan

Future

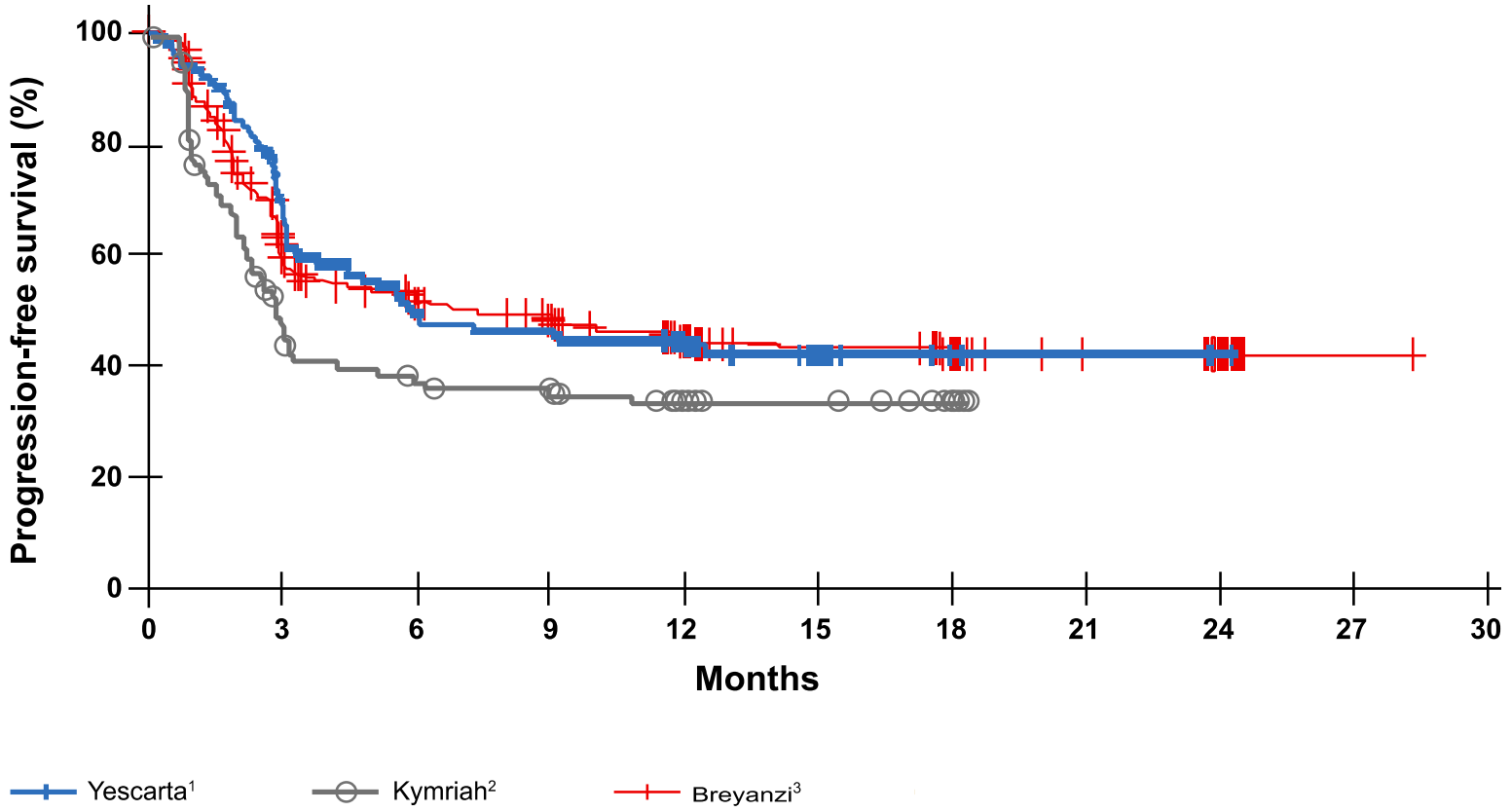
Optimizing Study Design Parameters for Phase 2 ALPHA2



Phase 2 Regimen = Single dose of ALLO-501A, FCA90 lymphodepletion and Alloy™ manufacturing

Allogene THERAPEUTICS

CD19 AlloCAR T: PFS Tracks with Approved CD19 Autologous CAR T

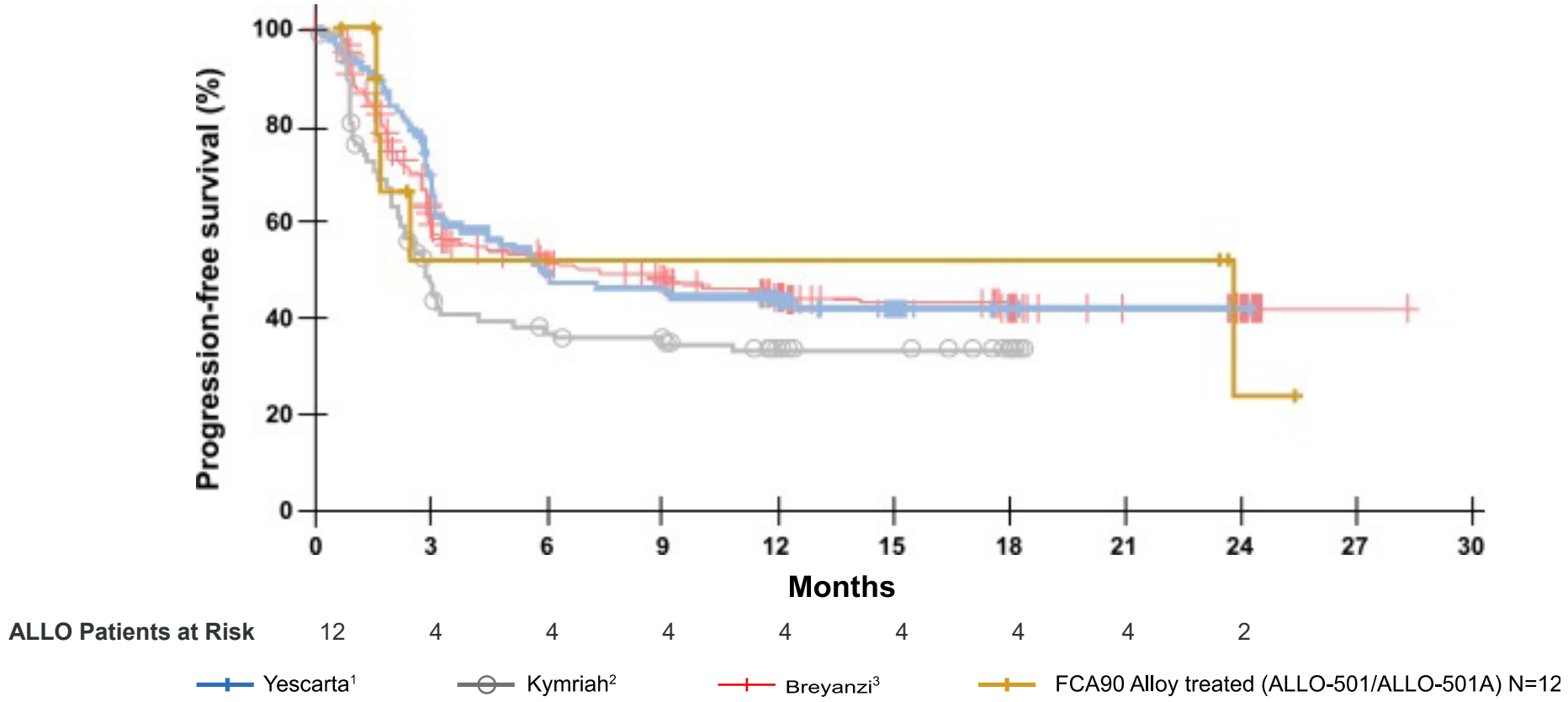


1. Neelapu SS, et al. *N Engl J Med.* 2017;377:2531-44. **2.** Schuster SJ, et al. *N Engl J Med* 2019;380:45-56. **3.** Abramson JS, et al. *Lancet* 2020; 396: 839-52

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..

Allogene THERAPEUTICS

CD19 AlloCAR T: PFS Tracks with Approved CD19 Autologous CAR T



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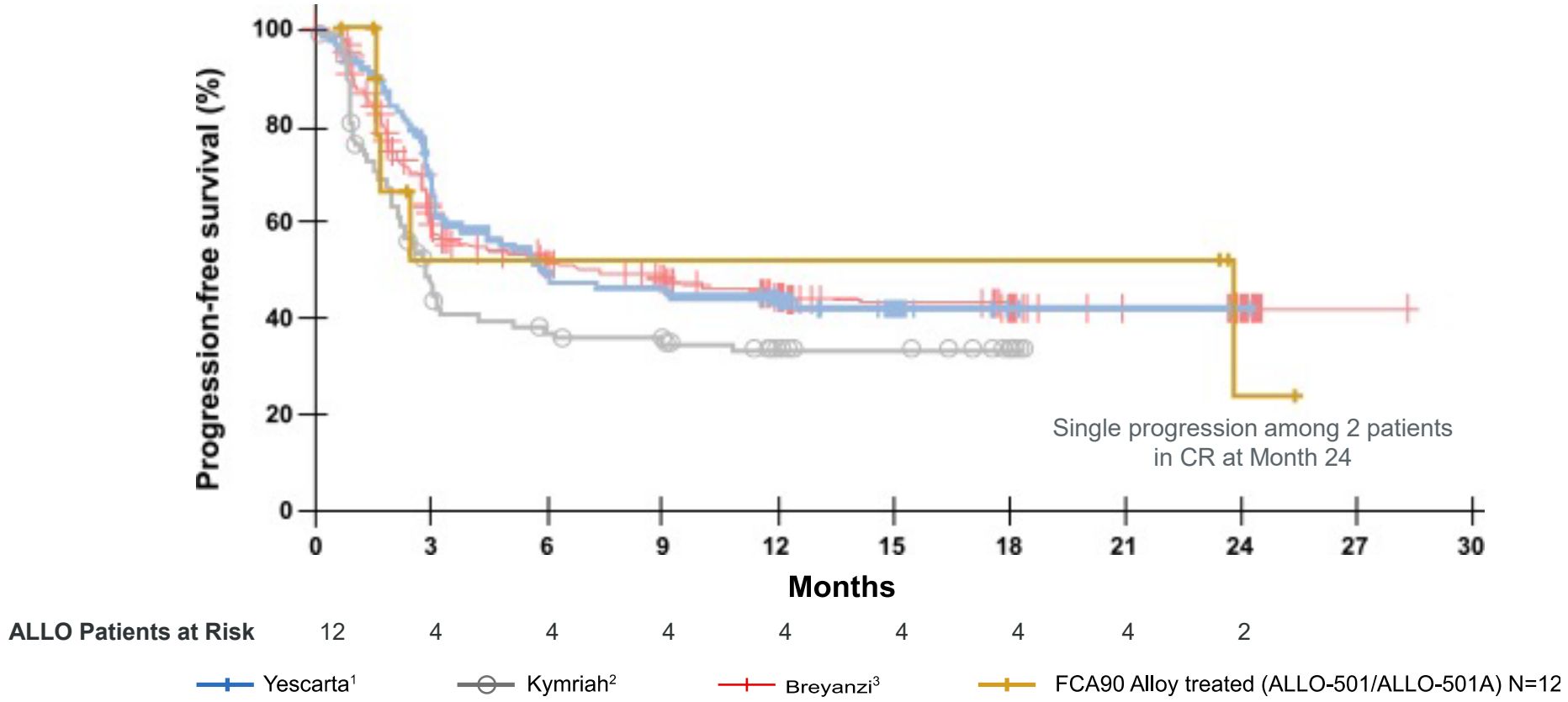
Data Cutoff Date: October 25, 2022

Allogene THERAPEUTICS

CD19 AlloCAR T: PFS Tracks with Approved CD19 Autologous CAR T



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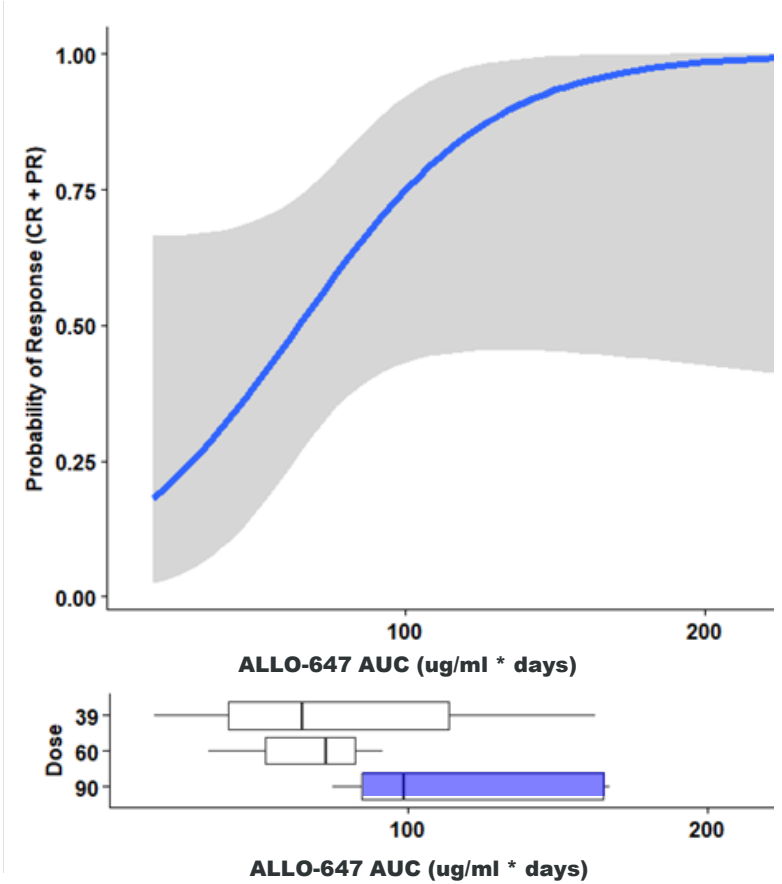
Data Cutoff Date: October 25, 2022

Allogene THERAPEUTICS

Proprietary ALLO-647 Platform Improved Clinical Outcomes

- Allogeneic CAR T dosed with standard FC lymphodepletion results in limited response rate and durability
- Addition of ALLO-647 to FC compared to FC alone* led to significant CAR T cell expansion
- Data demonstrate dose response relationship between ALLO-647 and likelihood of response and cell expansion
- FCA90 optimized for high probability of response
- EXPAND study designed to confirm contribution of ALLO-647 to standard FC lymphodepletion



*ASH 2018 Benjamin, R Abstract # 612

Allogene THERAPEUTICS

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	

Allogene THERAPEUTICS

Evolution of the BCMA Program in MM

Establish Proof of Concept

- No evidence of Graft vs. Host Disease
- Safe and effective lymphodepletion
- Cell expansion and initial signs of efficacy

ASH 2021

Validate Platform & Enhance Profile

- Optimal lymphodepletion and cell dosing established for Phase 2
- Delivered in spec product within days without need for bridging therapy
- Demonstrated durability of responses

Today

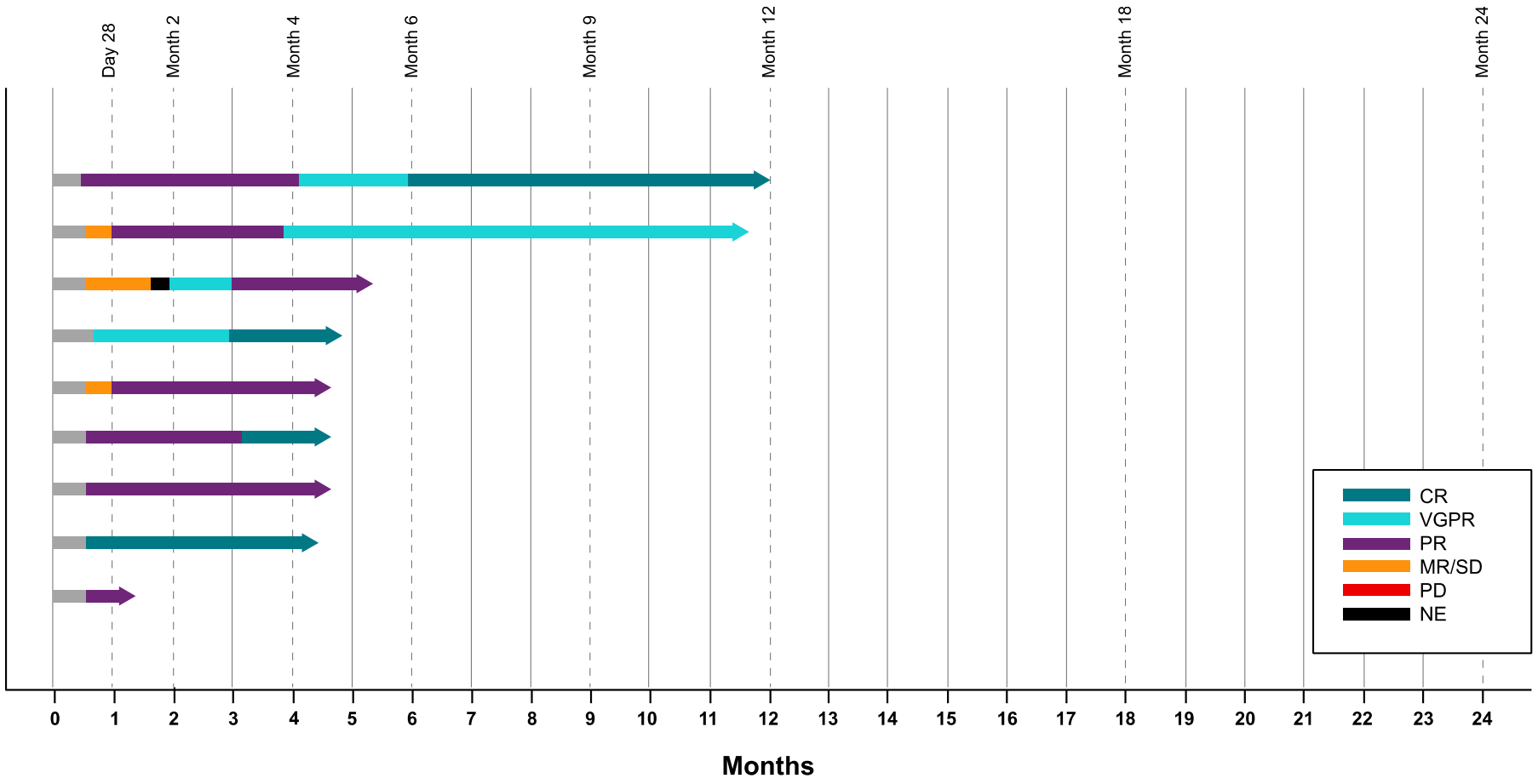
Deliver Approval and Launch

- Hold regulatory discussions and execute development plan
- Improve and scale manufacturing to meet demand
- Start Phase 2 study

Future

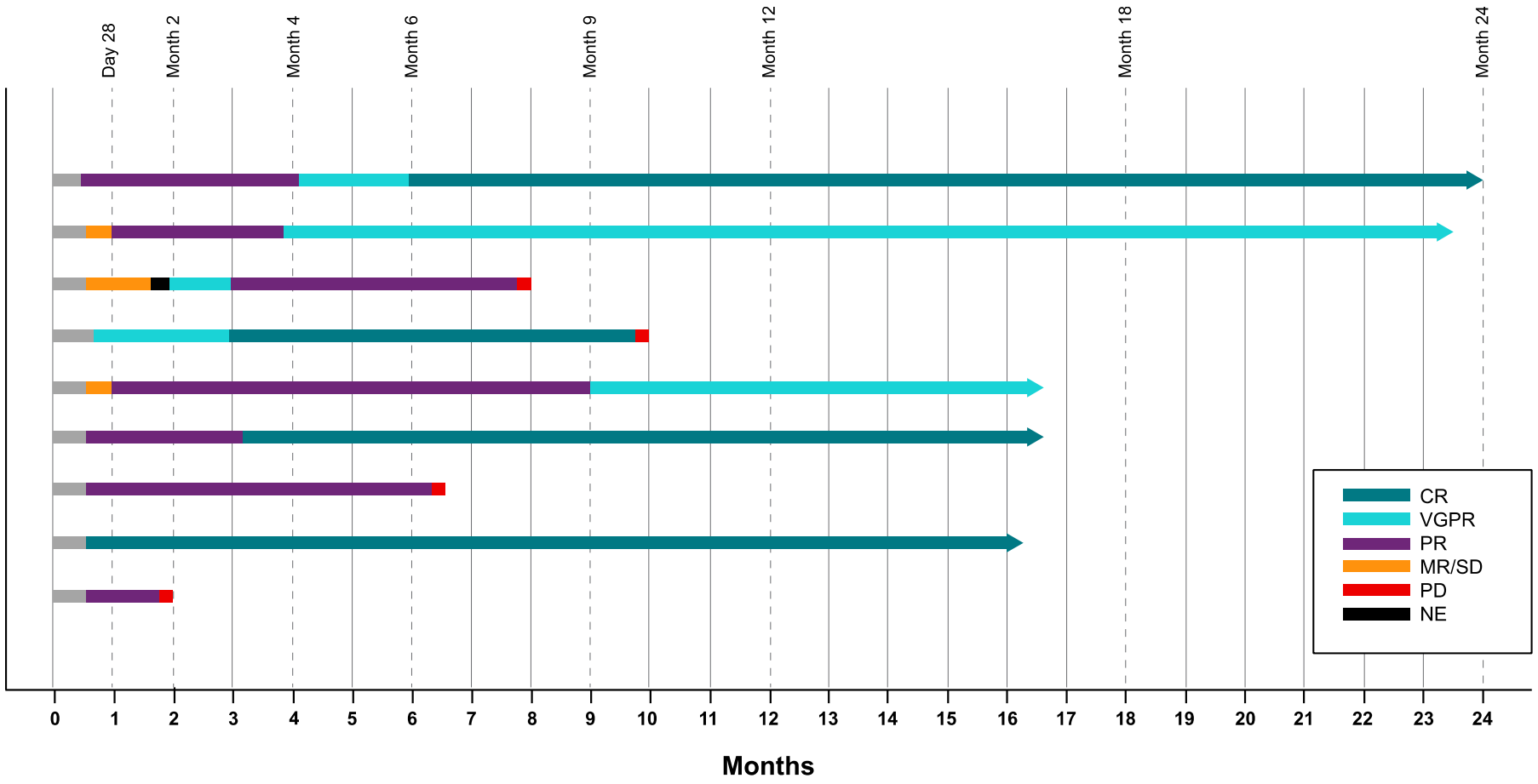
Allogene THERAPEUTICS

ASH 2021: Ongoing Responses with ALLO-715



Data Cutoff Date: October 27, 2021

Oct 2022 Update: Responses are Durable with ALLO-715



Data Cutoff Date: October 11, 2022

Allogene THERAPEUTICS

Progressing ALLO-715 to a Potentially Pivotal Phase 2 Trial

1. Finalized optimal lymphodepletion approach in Multiple Myeloma
2. Regulatory discussions planned for potentially pivotal Phase 2 trial
3. Further optimizing manufacturing process and transitioning ALLO-715 to CF1

Summary: Creating a Best & First-in-Class Profile in Heme

✓CD19 Program

- ALLO-501A can achieve deep, durable responses, has best-in-class potential
- Proprietary ALLO-647 platform improves clinical outcomes
- Selection process for optimized Phase 2 dosing regimen

✓BCMA Program

- ALLO-715 demonstrates activity on par with approved BCMA-directed therapies
- Preparation underway for a potentially pivotal Phase 2 trial

• CD70 Program

- Initial proof-of-concept data for ALLO-316 in renal cell carcinoma
- CD70 expression profiling to select patients most likely to respond
- Dagger™ Technology, a next generation allogeneic platform based on CD70 biology

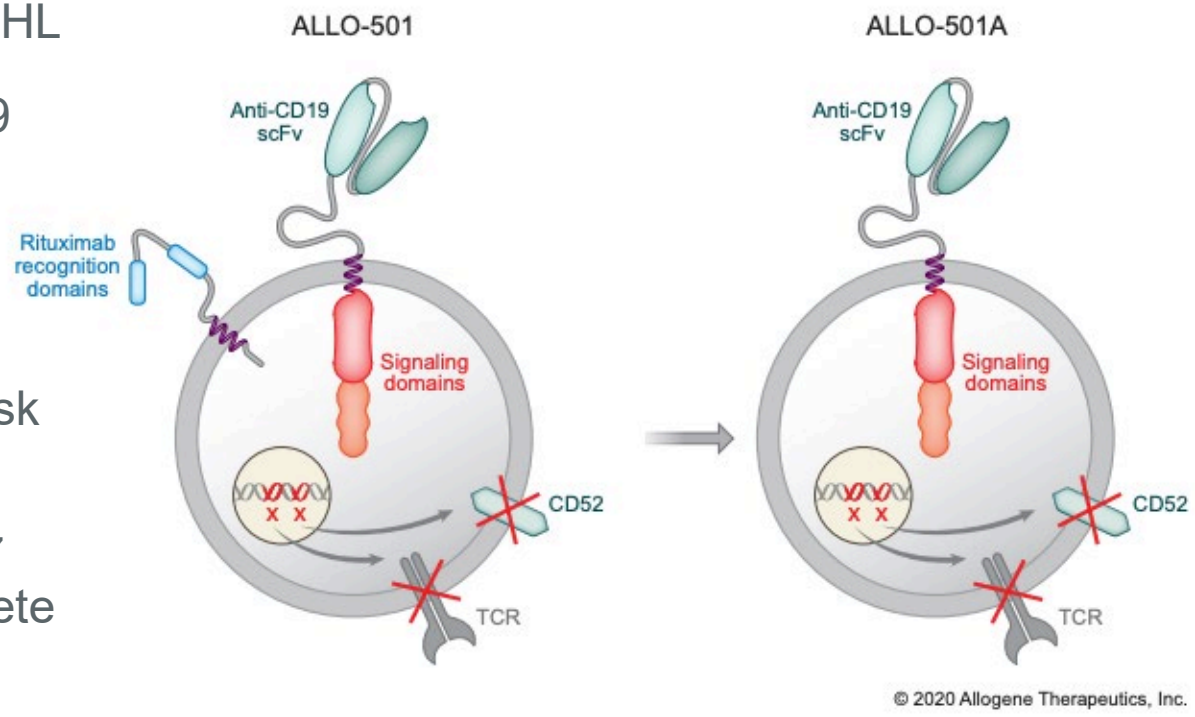
Allogene THERAPEUTICS

Frederick Locke, M.D.

ALLO-501 & ALLO-501A: The ALPHA Trials

ALPHA Studies: Background on ALLO-501 & ALLO-501A

- ALLO-501 is an allogeneic anti-CD19 CAR T cell product that established initial proof of concept in NHL
- ALLO-501A is next generation allogeneic anti-CD19 CAR T cell product that lacks rituximab recognition domains
- Both utilize TALEN®* gene editing to:
  - Knock-out TCRα constant gene – to reduce the risk of graft-versus-host disease (GvHD)
  - Knock-out CD52 gene – permits use of ALLO-647 (a humanized anti-CD52 mAb) to selectively deplete host T cells while leaving allogeneic CAR T cells untouched
- No HLA matching



*TALEN® gene editing is a technology pioneered and controlled by Cellectis.

Allogene THERAPEUTICS

The ALPHA Trials for R/R Large B Cell Lymphoma

Key Eligibility Criteria

ALPHA and ALPHA2

- Relapsed/refractory large B cell lymphoma (LBCL)
- ≥2 prior lines of therapy, including an anthracycline and anti-CD20 monoclonal antibody
- ECOG PS of 0 or 1

ALPHA2

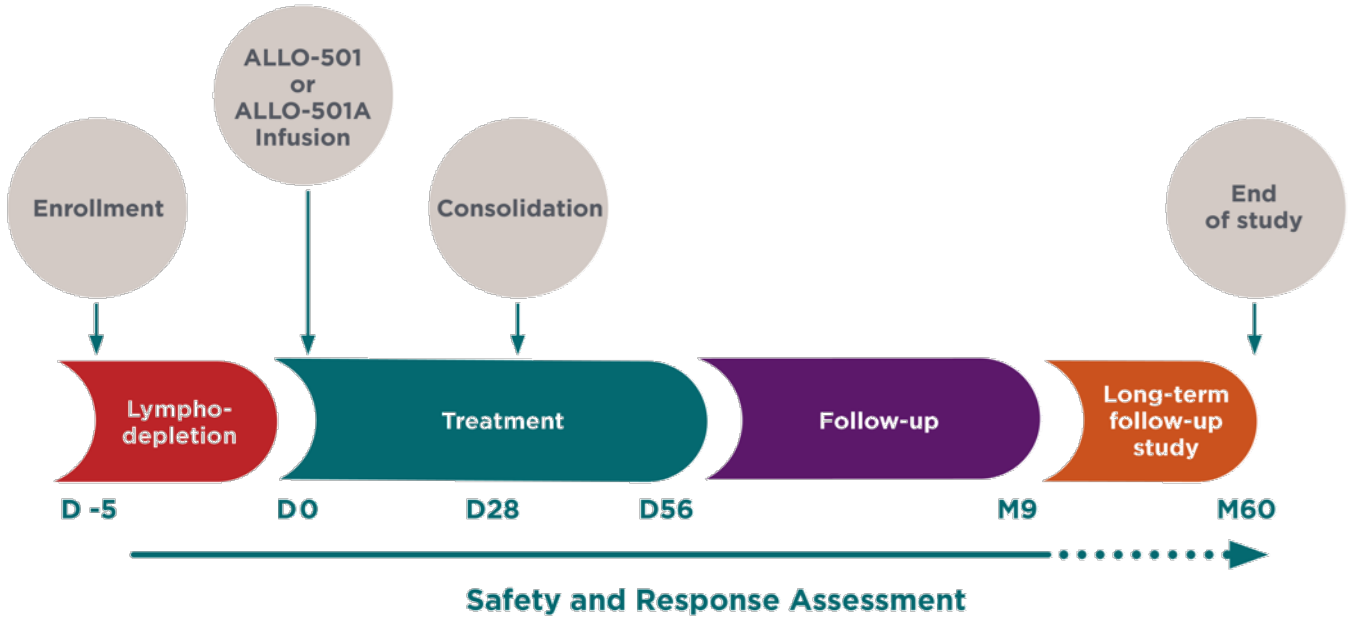
- Excluded patients with prior autologous CAR T

Primary Endpoints

- Safety and dose-limiting toxicity of ALLO-647/Flu/Cy followed by ALLO-501/ALLO-501A
- Overall response rate by investigator review

Secondary Endpoints

- ALLO-501/ALLO-501A cell expansion kinetics
- Durability of response
- ALLO-647 PK



Allogene THERAPEUTICS

Patient Demographics: Autologous CAR T Naive LBCL Patients

Characteristics		All LBCL* (n=48)	Alloy Process		
			All Alloy† (n=33)	Consolidation Regimens (n=15)	Single Dose FCA90 (n=12)
Age, median, years		66 (31, 76)	66 (31, 76)	67 (44, 76)	60 (31, 75)
Stage III disease, n (%)		14 (29)	10 (30)	5 (33)	4 (33)
Stage IV disease, n (%)		28 (58)	18 (55)	7 (47)	7 (58)
ECOG PS, n (%)	0	9 (19)	7 (21)	3 (20)	1 (8)
	1	39 (81)	26 (79)	12 (80)	11 (92)
Baseline LDH > ULN		32 (67)	22 (67)	10 (67)	8 (67)
IPI score, n(%)	3	16 (33)	10 (30)	5 (33)	3 (25)
	4	11 (23)	9 (27)	6 (40)	3 (25)
Germinal center subtype, n (%)		31 (65)	18 (55)	9 (60)	6 (50)
Double or triple hit, n (%)		15 (31)	10 (30)	5 (33)	4 (33)
Median # prior regimens (min, max)		3 (2, 8)	3 (2, 8)	2 (2, 8)	3 (2, 5)
Prior transplant, n (%)		8 (17)	7 (21)	0	6 (50)
Extranodal Disease, n (%)		28 (58)	18 (55)	8 (53)	6 (50)

- Across all LBCL, patients had advanced disease
  - 58% had stage IV disease
  - 23% had IPI score of 4
- Heavily pretreated patients
  - Median of 3 prior lines of therapy
  - 17% had prior transplant

* Includes Auto naïve treated LBCL patients in ALPHA and ALPHA2 Phase 1 studies; 15 patients were treated with non-Alloy material
† Includes six single dose subjects lymphodepleted with FC and A <90 mg

Data Cutoff Date: October 25, 2022

Allogene THERAPEUTICS

AlloCAR T Demonstrated Manageable Safety Profile

TEAE of Interest*	All LBCL (N=48)		Alloy Process					
			All Alloy (n=33)		Consolidation Regimens (n=15)		Single Dose FCA90 (n=12)	
	All Grs n (%)	Gr 3+ n (%)	All Grs n (%)	Gr 3+ n (%)	All Grs n (%)	Gr 3+ n (%)	All Grs n (%)	Gr 3+ n (%)
Cytokine Release Syndrome	11 (23)	0	8 (24)	0	3 (20)	0	4 (33)	0
Neurotoxicity†	15 (31)	3 (6)	12 (36)	2 (6)	6 (40)	2 (13)	4 (33)	0
ICANS	0	0	0	0	0	0	0	0
Graft-versus-Host Disease	0	0	0	0	0	0	0	0
Infection‡	25 (52)	9 (19)	19 (58)	5 (15)	8 (53)	3 (20)	8 (67)	1 (8)
Prolonged Gr3+ Cytopenia§	-	9 (19)	-	4 (12)	-	2 (13)	-	2 (17)

- Manageable safety profile:
  - No GvHD
  - No ICANS
  - CRS was low grade
  - Most common manifestations of neurotoxicity were consistent with previous reports and included tremor and muscle weakness

- 20 (42%) of all LBCL patients experienced an SAE
- Gr 3+ adverse events (AEs) occurred in 45 (94%) of all LBCL patients which included cytopenias
- 1 Gr 5 event in LBCL population was previously reported

* Number of patients with AE occurring from the start of study drug up to subsequent anti-cancer therapy. For patients reporting more than one AE within a preferred term, only one AE with the maximum grade is reported

† Neurologic toxicities include preferred terms within broad and narrow scope of Noninfectious encephalopathy/delirium SMQ

‡ All infections (bacterial, fungal, and viral) included

§ Prolonged cytopenia defined as Grade 3 or higher cytopenia present at day 56 and which has persisted for at least 21 days

Data Cutoff Date: October 25, 2022

Allogene THERAPEUTICS

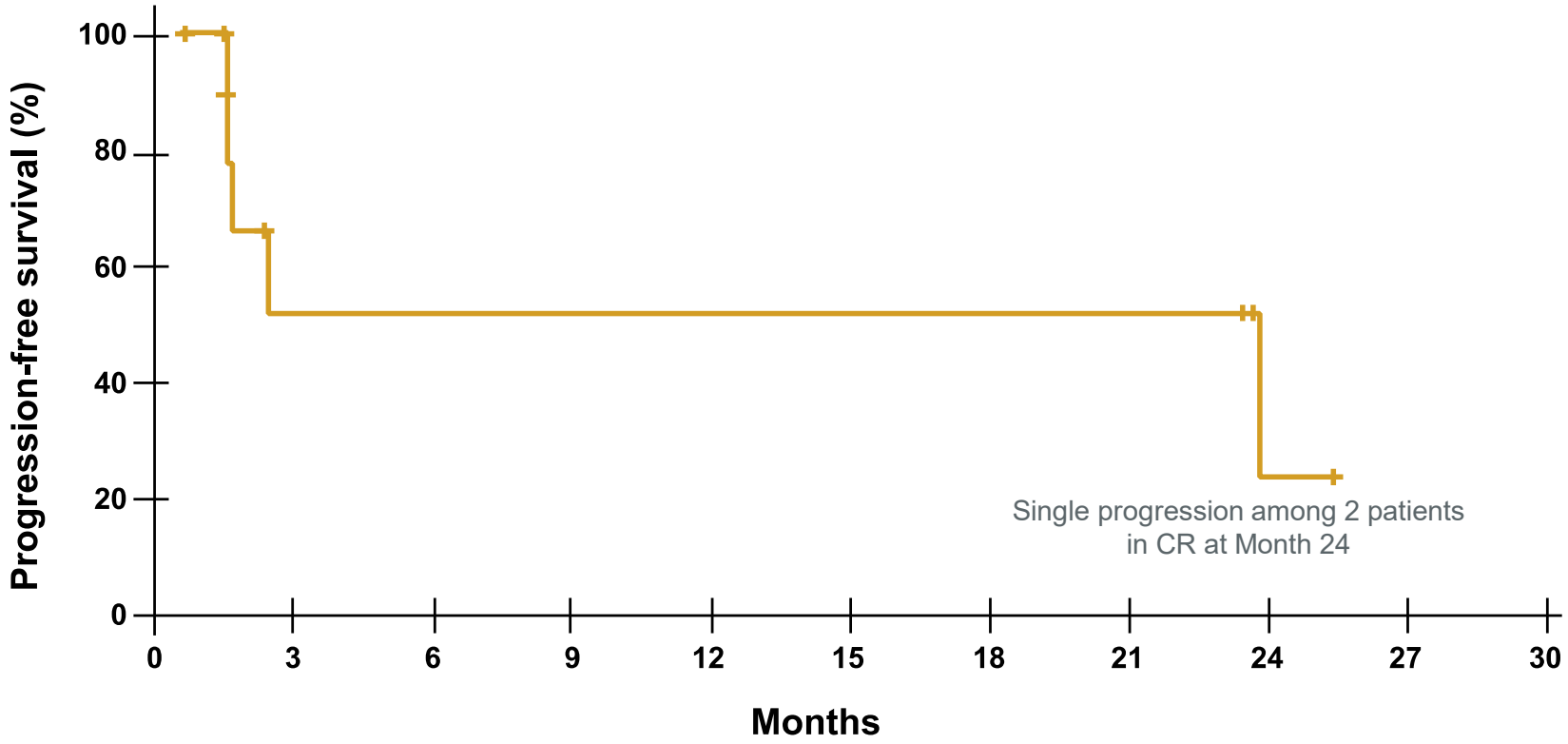
Optimal Clinical Outcomes with Single Dose FCA90

	All LBCL (n=48)	Alloy Process		
		All Alloy (n=33)	Consolidation Regimen (n=15)	Single Dose FCA90 (n=12)
Overall Response Rate (ORR), n (%)	23 (48)	19 (58)	8 (53)	8 (67)
Complete Response (CR), n (%)	14 (29)	14 (42)	6 (40)	7 (58)
6-month CR rate, n (%)	9 (23)	9 (31)	5 (33)	4 (50)
12-month CR rate, n (%)	8 (21)	8 (28)	4 (27)	4 (50)

- ORR and CR in patients treated with Alloy single dose FCA90 is 67% and 58%, respectively with a median duration of response of 23.1 months
- Patients in the single dose FCA90 cohort who had the opportunity to be followed for 6 and 12 months had 6-month and 12-month CR rate of 50%
- 92% of enrolled patients (Alloy process) received product
  - 100% of infused product manufactured and released per product specifications
  - Treatment initiation within 2 days of enrollment

Data Cutoff Date: October 25, 2022

Durability of Response from Single Dose FCA90 Reflected in Prolonged PFS



Patients at Risk	12	4	4	4	4	4	4	4	2

Data Cutoff Date: October 25, 2022

ALPHA Studies Demonstrated Access, Feasibility & Durability with AlloCAR T

- Single Infusion of ALLO-501/501A manufactured with Alloy process material produced deep and durable responses in patients with r/r LBCL
  - 67% ORR and 58% CR Rate with single cell dosing plus proprietary lymphodepletion (FCA90)
  - 50% 6-month and 12-month CR rates with single infusion of CAR T cells following FCA90 lymphodepletion with the longest CR ongoing at 26+ months
- No DLTs, ICANS or GvHD
  - FCA90 generally well tolerated with no Grade 3+ CRS or neurotoxicity
  - Safety Aligned with Autologous CAR T Therapy
- 92% of enrolled patients received product
  - 100% of infused product manufactured and released per product specifications
  - Treatment initiation within 2 days of enrollment
- FDA RMAT Designation granted to ALLO-501A for r/r LBCL
- Data establishes strong foundation for the ongoing ALPHA2, the industry's first potentially pivotal Phase 2 trial

Data Cutoff Date: October 25, 2022

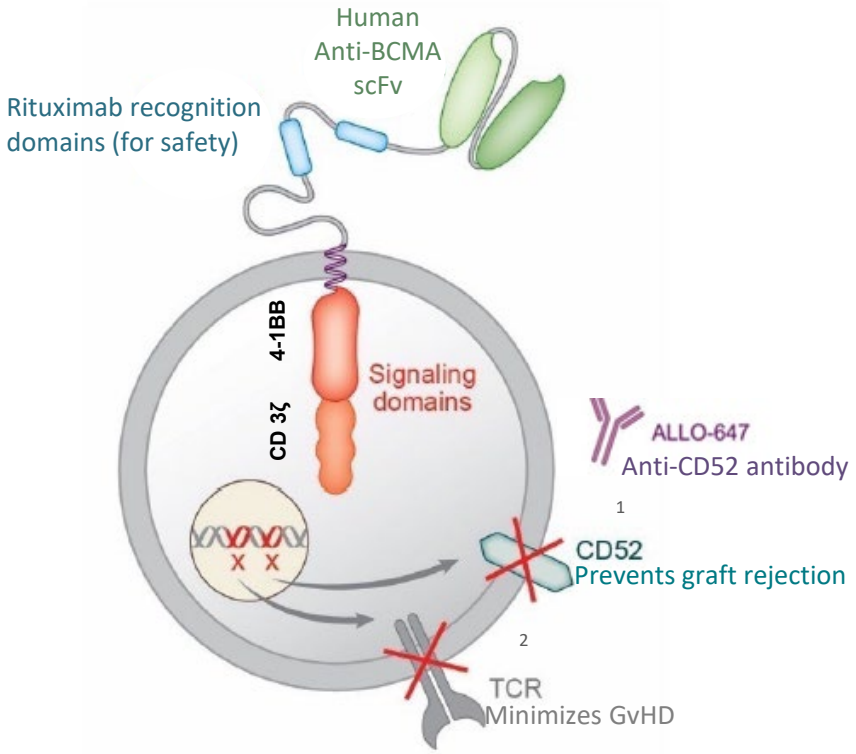
Adriana Rossi, M.D.

ALLO-715: The UNIVERSAL Trial

Allogene THERAPEUTICS

UNIVERSAL Study: Background on ALLO-715

- ALLO-715 is an allogeneic anti-BCMA CAR T cell product utilizing TALEN®* gene editing specifically designed to
  - Knock-out TCRα constant gene – to reduce the risk graft-versus-host disease (GvHD)
  - Knock-out CD52 gene – permits use of ALLO-647 (a humanized anti-CD52 mAb) to selectively deplete host T cells while leaving allogeneic CAR T cells untouched
- No HLA matching
- This update reports on ALLO-715 dose expansion cohorts of 320M CAR+ cells (DL3) using FCA39 and FCA60 lymphodepletion regimens



*TALEN® gene editing is a technology pioneered and controlled by Cellectis.

1. TALEN-mediated CD52 KO allows selective lymphodepletion with ALLO-647
2. TALEN-mediated TRAC KO eliminates TCRα expression to minimize risk of GvHD

Allogene THERAPEUTICS

UNIVERSAL: First Allogeneic BCMA CAR T Study in Multiple Myeloma

Phase 1, Open-label, Multicenter Dose Escalation Study Enrolling in 13 US Centers

Key Eligibility Criteria

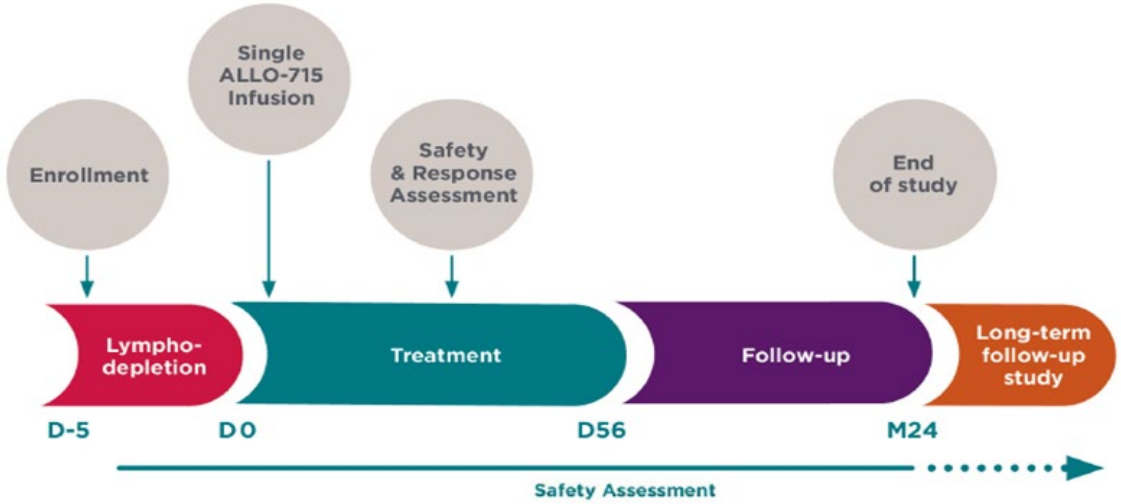
- Relapsed/Refractory Multiple Myeloma
- ≥ 3 prior therapies including IMiD, proteasome inhibitor & anti-CD38
- Refractory to last prior therapy
- ECOG 0 or 1
- No donor-specific antibodies
- No bridging therapy allowed

Primary Endpoints

- Safety and tolerability

Secondary Endpoints

- Recommended ALLO-715 P2 dose and lymphodepletion regimen
- Anti-tumor activity (ORR, duration of response, PFS, and MRD)
- ALLO-715 cellular kinetics
- ALLO-647 pharmacokinetics



ALLO-715 Dose Escalation: 40, 160, 320, 480 x 10^6 CAR+ T cells	
Lymphodepletion Regimens (FCA*, CA†)	**Doses**
Fludarabine	30 mg/m²/day x 3 days
Cyclophosphamide	300 mg/m²/day x 3 days
ALLO-647	13 to 30 mg/day x 3 days

ALLO-715 dose expansion cohort was at 320M CAR+ (DL3) using FCA39 and FCA60 Lymphodepletion regimens and is reported here

* FCA conditioning with fludarabine, cyclophosphamide and ALLO-647
† CA conditioning with cyclophosphamide and ALLO-647

Allogene THERAPEUTICS

Patient Demographics: Dose Level 3 Expansion Cohorts

	Expansion Cohorts		
	N=28	FCA39 (n=11)	FCA 60 (n=17)
Age, median (range), yrs	65 (49, 78)	66 (57, 77)	65 (49, 78)
Gender: Male / Female, %	64 / 36	64 / 36	65 / 35
ECOG PS: 0 / 1, %	50 / 50	55 / 46	47 / 53
ISS Stage III, %	25	0	41
High-Risk Cytogenetics*, %	25	27	29
Extramedullary Disease, %	29	36	24
High Tumor Burden†, %	25	36	18
Time Since Initial Diagnosis, median (range), yrs	7.2 (1.9, 26.4)	6.4 (2.5, 20.5)	8.1 (1.9, 26.4)
Prior Anti-Myeloma Regimens, median (range)	6 (3, 9)	8 (3, 9)	6 (3, 9)
Prior Autologous SCT, %	89	91	88
Penta-Refractory, %	25	36	24

- Median time from enrollment to treatment was 5 days
- 92% of all enrolled patients received ALLO-715 with 100% manufactured and released as per product specifications
- 86% of patients were penta-exposed; 25% of patients were penta-refractory
- Patient demographics in general similar to those in autologous CAR T clinical trials

* High risk cytogenetics is defined as del 17p, t(4;14), and t(14;16)
† High tumor burden consider when more than 50% plasma cells in bone marrow

Data Cutoff Date: October 11, 2022

Allogene THERAPEUTICS

ALLO-715 and ALLO-647 Demonstrated Manageable Safety Results

TEAE of Interest*	Expansion Cohorts (n=28)	
	All Grades n (%)	Grade 3+ n (%)
Cytokine Release Syndrome	19 (68)	1 (4)
Neurotoxicity†	17 (61)	0
ICANS	1 (4)	0
Graft-versus-Host Disease	0	0
Infection‡	19 (68)	8 (29)
Prolonged Gr3+ Cytopenia§	-	8 (29)

- Manageable safety profile across all doses
  - No DLTs
  - 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%

- 19 (68%) of expansion patients experienced an SAE
- Gr 3+ infections occurred in 8 (29%) of patients with 1 Gr 5 infection (sepsis) previously reported at ASH 2021; no other Gr 5 events occurred in expansion cohorts

* Number of patients with AE occurring from the start of study drug up to subsequent anti-cancer therapy. For patients reporting more than one AE within a preferred term, only one AE with the maximum grade is reported
† Events of NT identified using Allogene MedDRA query, over 200 preferred terms (PT) selected to identify the medical concept of Neurologic toxicities including ICANs
‡ All infections (bacterial, fungal, and viral) included
§ Prolonged cytopenia defined by as any grade 3 or higher higher cytopenia present at Day 28
Expansion cohorts include all treated at FCA39 and FCA60 and 320M cells.

Data Cutoff Date: October 11, 2022

Allogene THERAPEUTICS

Expansion Cohorts Demonstrated Deep and Durable Responses

	Expansion Cohorts		
LD Regimen	Total (n=23)	FCA39 (n=11)	FCA60 (n=12)
ORR,* n (%)	15 (65)	7 (64)	8 (67)
VGPR+† rate, n (%)	11(48)	6 (54)	5 (42)
CR/sCR‡ rate, n (%)	5 (22)	3 (27)	2 (17)
Median DOR	8.3	8.3	9.2

Five patients with best responses ranging from stable disease to partial response are not included due to limited follow-up

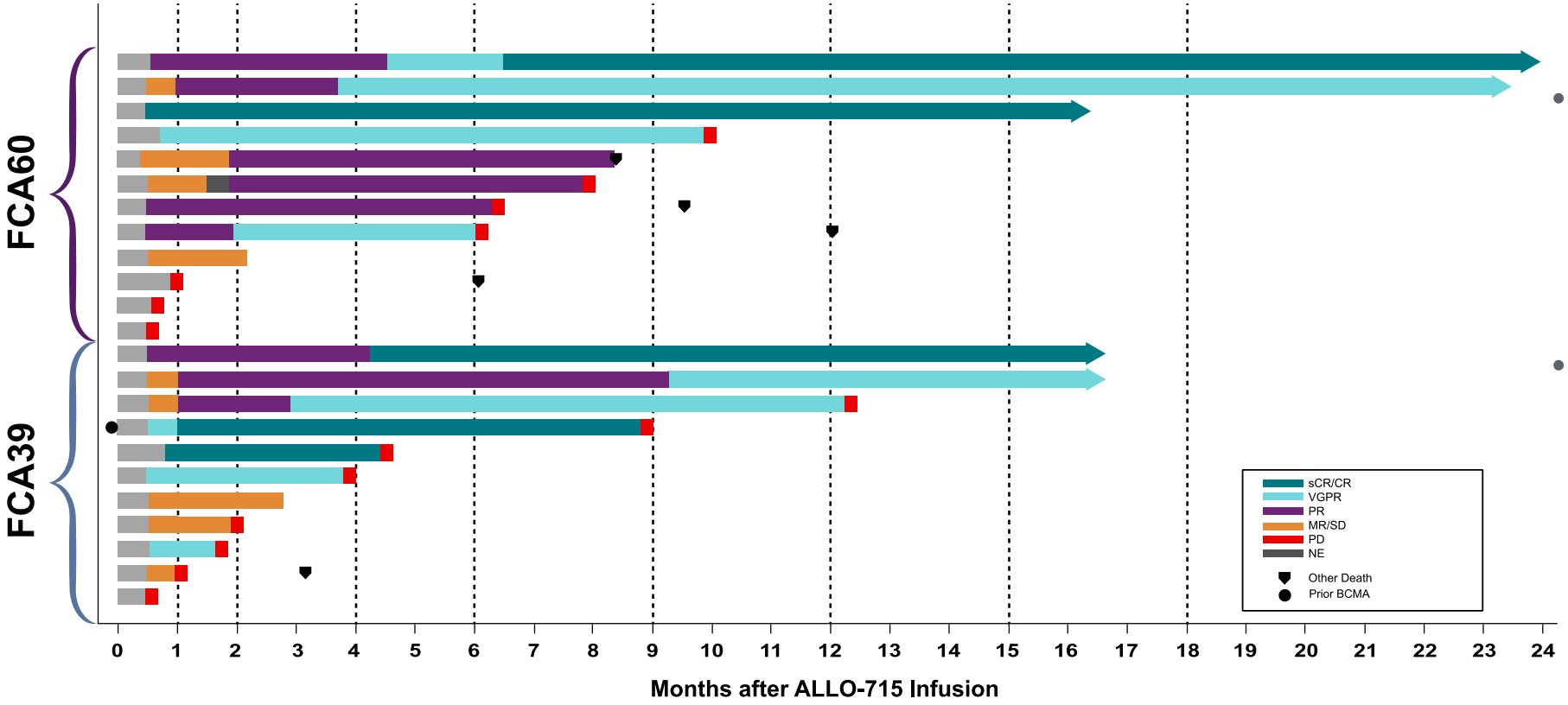
- Through a median follow-up of 14.8 months, the ORR was 64% in the FCA39 cohort and 67% in the FCA60 cohort
- Expansion cohorts achieved durable responses in patients with R/R MM with a median DOR of 8.3 and 9.2 months in FCA39 and FCA60, respectively.
- All VGPR+ patients achieved MRD negative status
- 92% of all enrolled patients received product
  - 100% of infused product manufactured and released per product specifications
  - Treatment initiation within 5 days of enrollment with no bridging therapy

*Overall response rate, confirmed; clinical response evaluation was based on International Myeloma Working Group (IMWG) response criteria. An objective response is defined as a partial response or better
†VGPR+ is very good partial response, complete response or stringent complete response, confirmed
‡Complete response/stringent complete response

Data Cutoff Date: October 11, 2022

Allogene THERAPEUTICS

Expansion Cohorts Durable Responses Continued



- 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

Data Cutoff Date: October 11, 2022

Allogene THERAPEUTICS

Results Demonstrate Feasibility of AlloCAR T in Multiple Myeloma

- UNIVERSAL has demonstrated significant and durable responses with a manageable safety profile and ongoing responses up to 24 months
- ALLO-715 expansion cohorts with FCA lymphodepletion was associated with clinically meaningful efficacy, including VGPR+ rates of nearly 50% without requiring leukapheresis or bridging therapy
- All patients who were VGPR+ achieved MRD negative status
- 92% of enrolled patients received product
  - 100% of infused product manufactured and released as per product specifications
  - Treatment initiation within 5 days of enrollment with no bridging therapy
- DL3 (320 million CAR+ cells) with FCA60 lymphodepletion is promising and deserves further exploration

Data Cutoff Date: October 11, 2022

Allogene THERAPEUTICS

Investigator Insight

Rafael Amado, M.D.

Moderator

Herbert Eradat M.D.

Internal Medicine Specialist, Ronald Reagan UCLA Medical Center and UCLA Santa Monica Medical Center

Frederick Locke, M.D.

Chair, Department of Blood & Marrow Transplant and Cellular Immunotherapy; program co-leader, Immuno-Oncology, Moffitt Cancer Center

Nikhil C. Munshi, M.D.

Professor, Medical Oncology, Dana-Farber Cancer Institute

Adriana Rossi, M.D.

Assistant Professor Hematology and Medical Oncology; Co-Director CAR T and Stem Cell Transplant Center, The Mount Sinai Hospital

CD19 AlloCAR T: Complete Response Competitive with Autologous 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%
% enrolled who did not receive intended cell product	8%	8%	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*
^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

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Single Dose ALLO-715 Data Indicates 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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Heme Panel

Allogene THERAPEUTICS

Alison Moore, Ph.D.

The ALLO Manufacturing Difference

Engine for Innovation, Execution and Growth

- **Deep** GMP processes understanding
- **Cell Forge 1** manufacturing facility
- **Highly characterized** drug product
- **20K** potential doses per year at scale

Allogene THERAPEUTICS

We've Built a Fully Integrated Operations Technology Organization

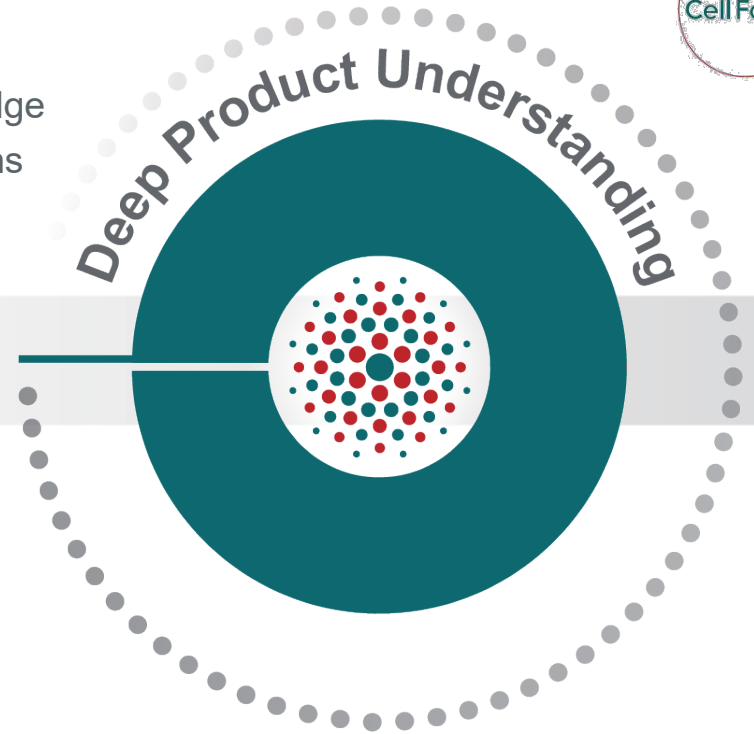
Process & Analytical Development

- Deep GMP Process Knowledge
- Characterized Unit Operations

Manufacturing

- 140K ft^2 Modular Facility
- Designed to US and International Commercial cGMP Standards

~170
Full-time Operations Technology Staff



~20K
Patients **Per Year**
Manufacturing Capacity*

Quality & Product Characterization

- Qualified Release Tests
- Internal Unbiased Product Data Analysis

Supply Chain Management

- Qualified Suppliers Across all Input Materials
- Ultracold Inventory and Logistics in Place Nationally and Pending in EU

*Projection for first potential commercial asset at scale

Allogene THERAPEUTICS

Cell Forge 1: Control of Manufacturing Execution, Schedule & Cost

- Flexible design creates agility for process changes
- In-house Quality Control supports rapid development of complex CAR T methods
- Proximity to Headquarters enables rapid technology exchange and investigation support
- End to end capabilities include PBMC processing, CAR T production, filling, and inventory management

- ~140k ft^2 facility with expansion space
- LEED Gold certified

Allogene THERAPEUTICS

Continuous Product Learning Drives Improved Product Performance

Product Understanding

Molecular Design

Process Design

Method Design

Product Performance

In Vitro Models

Product Characterization

Translational Data

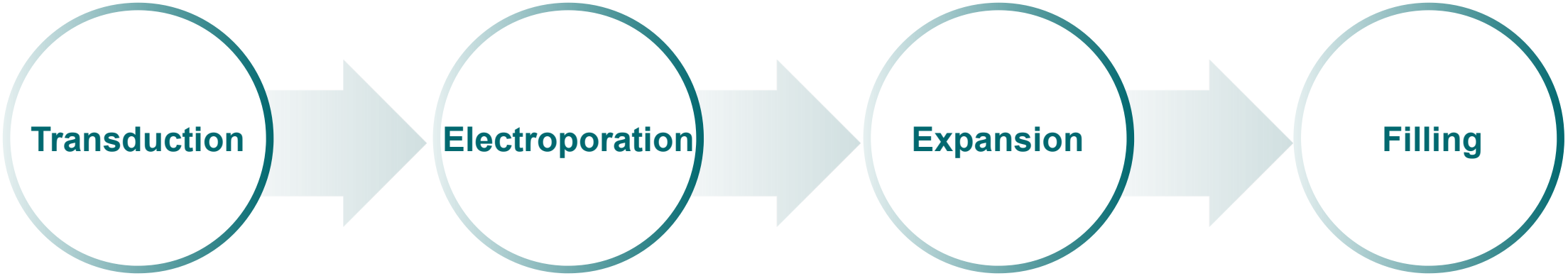
Clinical Data

Fully Integrated Data Architecture & Analytics

Allogene THERAPEUTICS

Features of the Alloy™ Process Connect Directly to Product Attributes

The Alloy™ process is a system of interdependent unit operations which influence the resulting T cell population



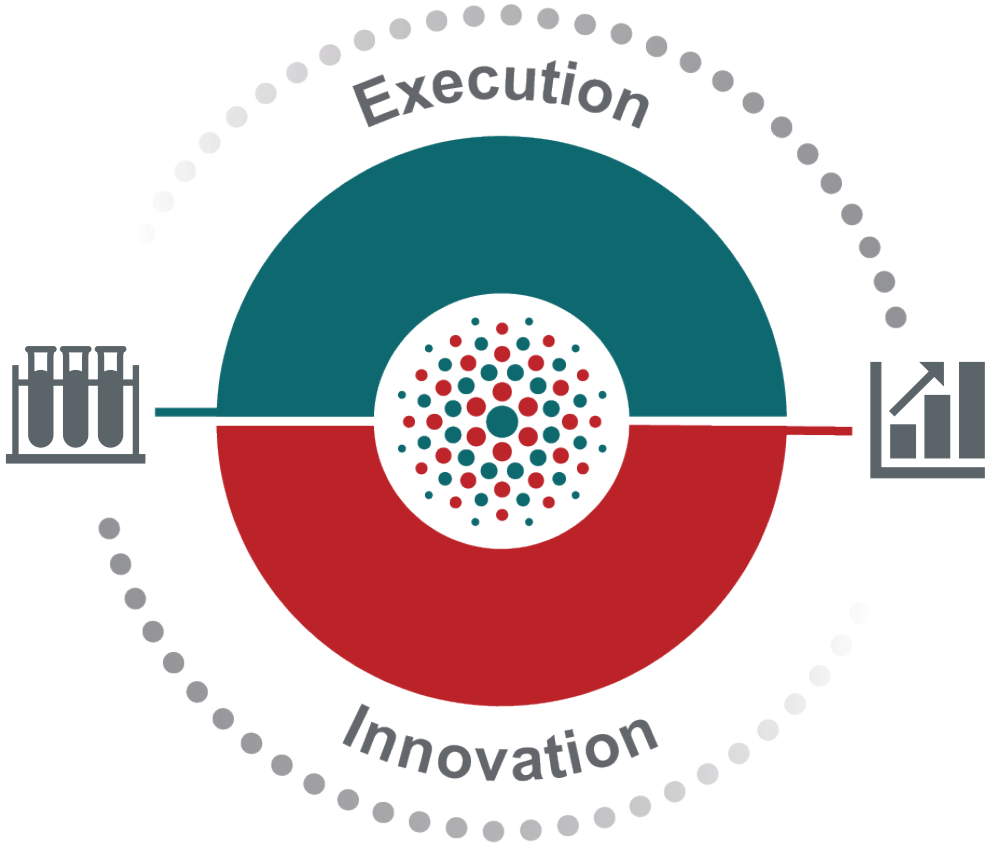
- Conditions optimized for performance and reproducibility
- Supported by orthogonal methods for detailed analyses

Allogene THERAPEUTICS

Deploying Process Optimization Across Programs

Leveraging our Insights

- We have significant manufacturing experience across our programs
- Multiple processes implemented in Phase 1 studies
- Our data analytics captured superior performance of the 'Alloy' process for ALLO-501A



- Initiating our ALLO-501A Phase 2 study with Alloy™ material
- Bringing the Alloy™ process to our CF1 facility
- Continuing learnings and insights for potential optimizations across other products

Allogene THERAPEUTICS

We've Delivered on a High Bar to Achieve Pivotal Readiness

Achieved Phase 2 Readiness

- Initial Product Characterization
- Method Qualification/Validation
- Drug Product Specifications
- Starting Material Specifications
- Lot Release with Pivotal Specs

Preparing for Potential BLA

- Product & Process Characterization
- Process Performance Qualification
- Critical Starting Material and Raw Material Characterization
- Drug Product and Raw Material Method Validation

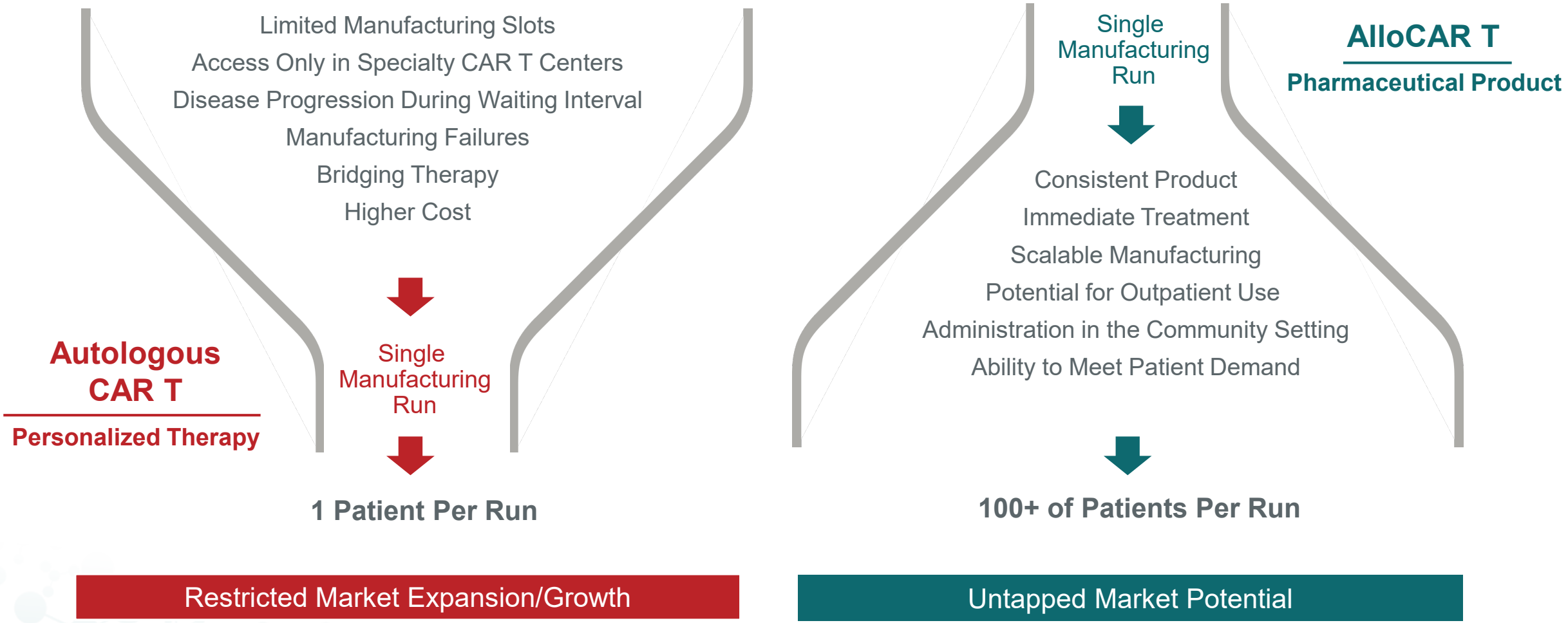
Building Strong Working Relationship with Regulatory Agencies

Allogene THERAPEUTICS

Eric Schmidt, Ph.D.

The AlloCAR T™ Product Opportunity

AlloCAR T: Potential to Break the Bottleneck in Cell Therapy



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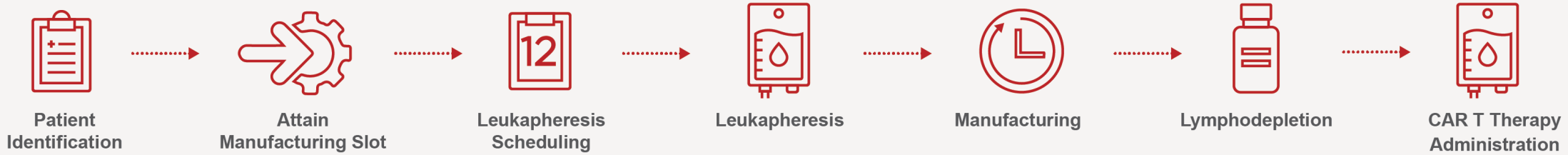
Ushering in a New Era in Cell Therapy

Transforming a complex procedure…

Autologous CAR T Procedure

3 Weeks to 6+ Months



…into an “off-the-shelf” biopharmaceutical product

AlloCAR T™ Products

2 to 5 Days

Allogene THERAPEUTICS

Potential for First- and Best-in-Class Products

Factors Influencing Treatment Decision	ALLO-501A*	ALLO-715**	Potential AlloCAR T Product Advantages
Efficacy	CR: 58% 6-month CR: 50%	ORR: 67% mDoR: 9.2	Deep, durable responses
Safety	Gr3+ CRS: 0% Gr3+ Neurotox: 6% GvHD: none	Gr3+ CRS: 0% Gr3+ Infections: 35% GvHD: none	Low rates of CAR T-related SAEs
Access	Guaranteed product Available within 2 days	Guaranteed product Available within 5 days	Scalable, off-the-shelf product with rapid time to dosing
Convenience	Single dose	Single dose	1x dosing with potential for outpatient use

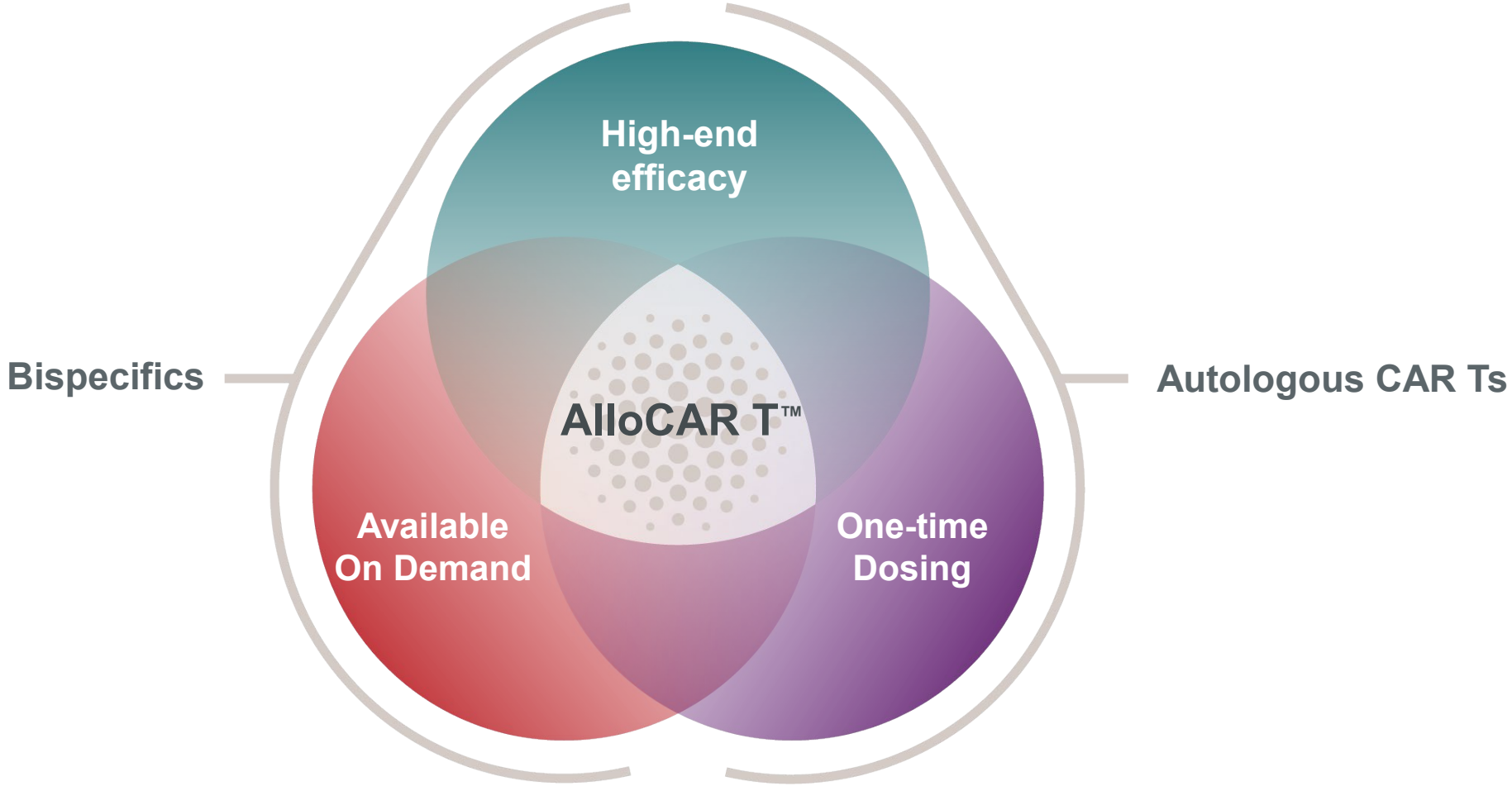
Sources: Allogene Market Research data on file

* ALLO-501A and ALLO-501 Phase 1 data with single dose and FCA90 lymphodepletion, as of October 25, 2022

**ALLO-715 Phase 1 data with single dose and FCA60 lymphodepletion, as of October 11, 2022

Allogene THERAPEUTICS

AlloCAR T Uniquely Positioned to Deliver Value to Patients



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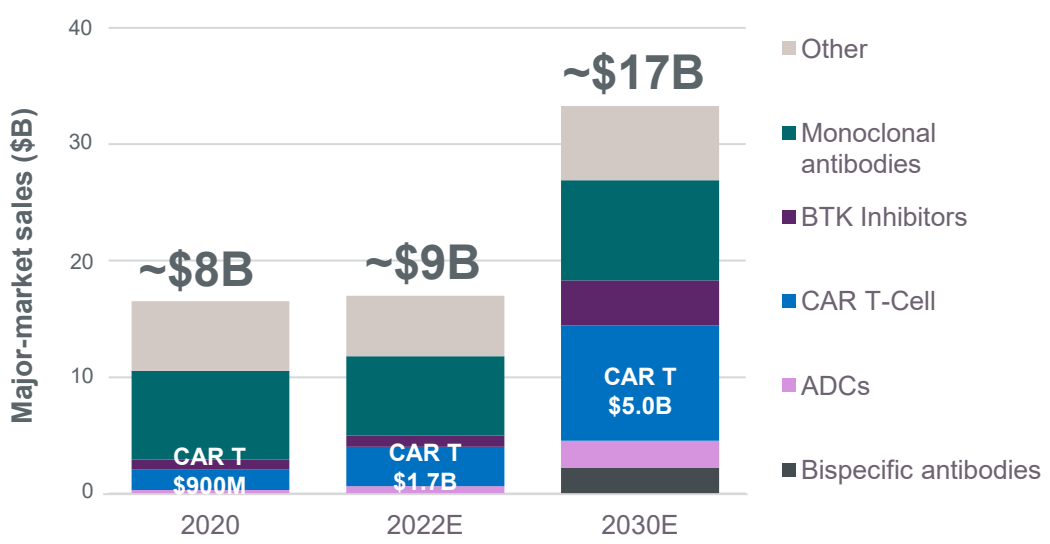
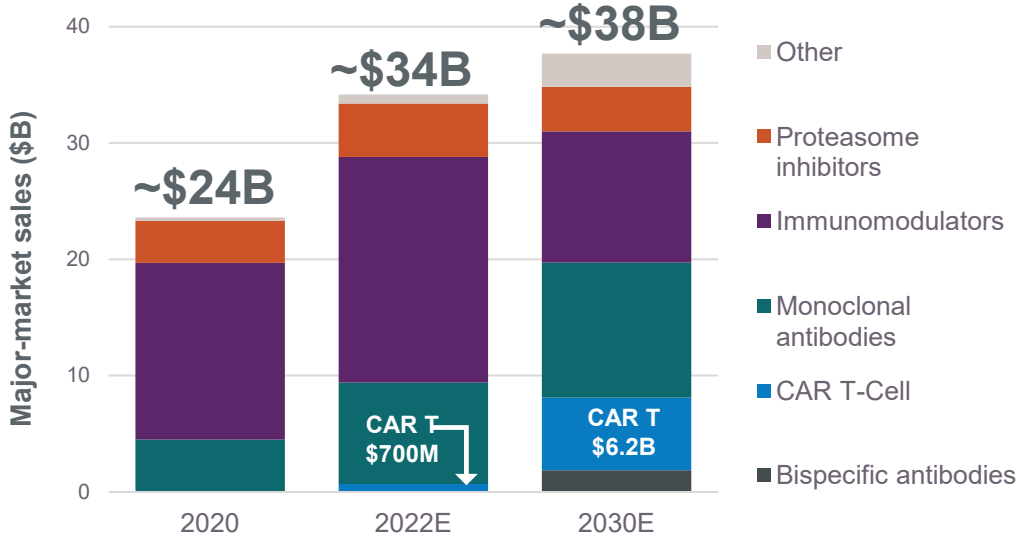
Addressing Large, Growing Markets Receptive to Innovation

NHL Sales*



Multiple Myeloma Sales*



>$1B Brands (2022)

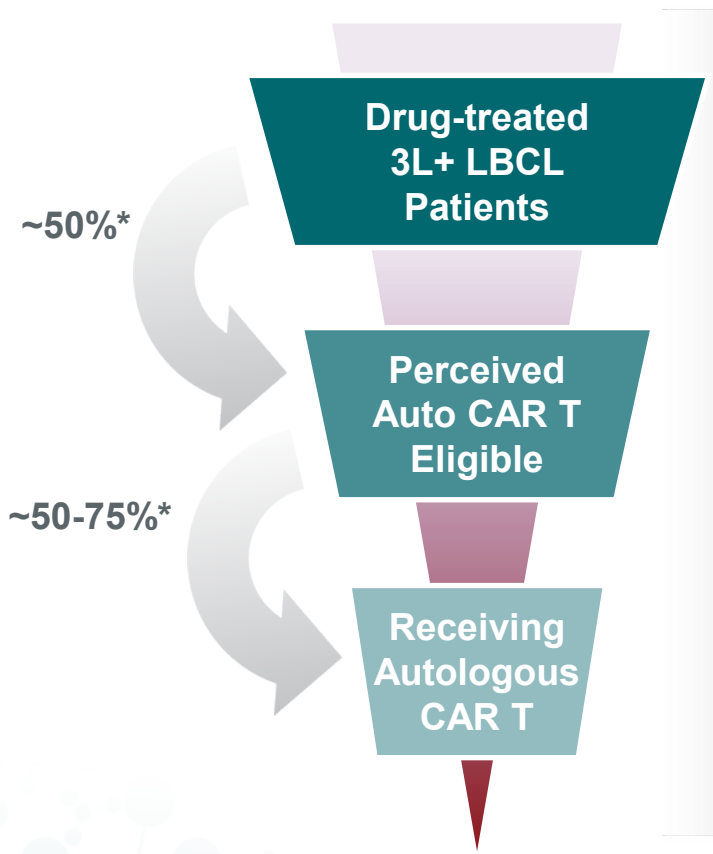
Rituxan (Rituximab) · Revlimid (lenalidomide) capsules · YESCARTA (axicabtagene ciloleucel)

Revlimid (lenalidomide) capsules · VELCADE (bortezomib) FOR INJECTION · Pomalyst (pomalidomide) capsules · Kyprolis (carfilzomib) · DARZALEX (daratumumab)

Allogene Therapeutics

AlloCAR T: Potential to Penetrate and Expand the NHL Market

Current patient flows*



NHL Drug-treated patients (2030)

1L LBCL	76,400
2L LBCL	26,000
3L+ LBCL	14,600
r/r FL	28,000
r/r MCL	9,900

Total patients in potential CAR T NHL indications: **~155,000****

Potential Estimated CAR T Sales (2030)

$5B in sales = **<10%** Penetration of NHL patients

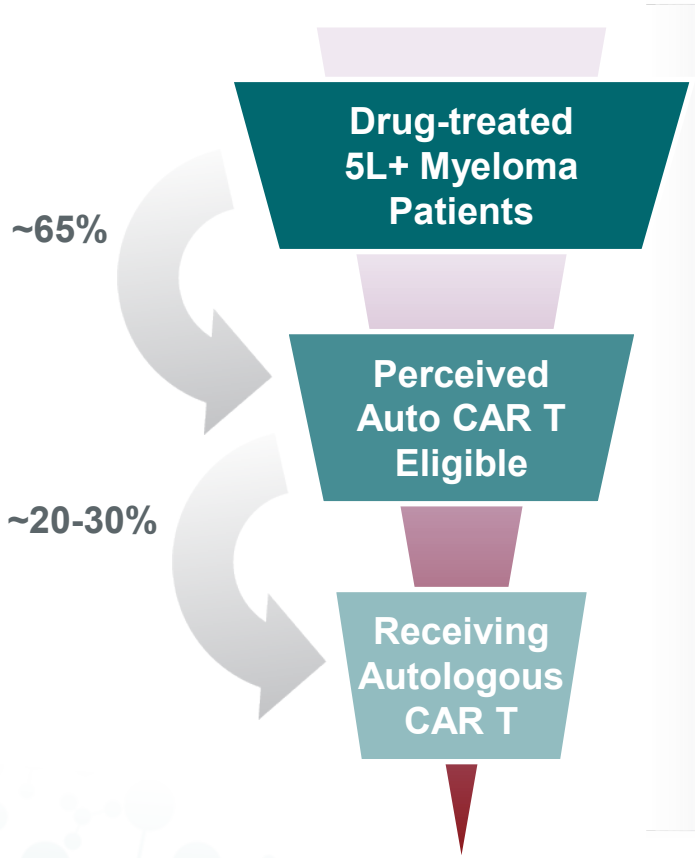
*Internal market research data on file

** Projected 2030 Drug-treated incident patient in G7 major markets. Allogene assumptions on potential CAR T NHL indications in 2030 and average CAR T cost of $400K/patient.

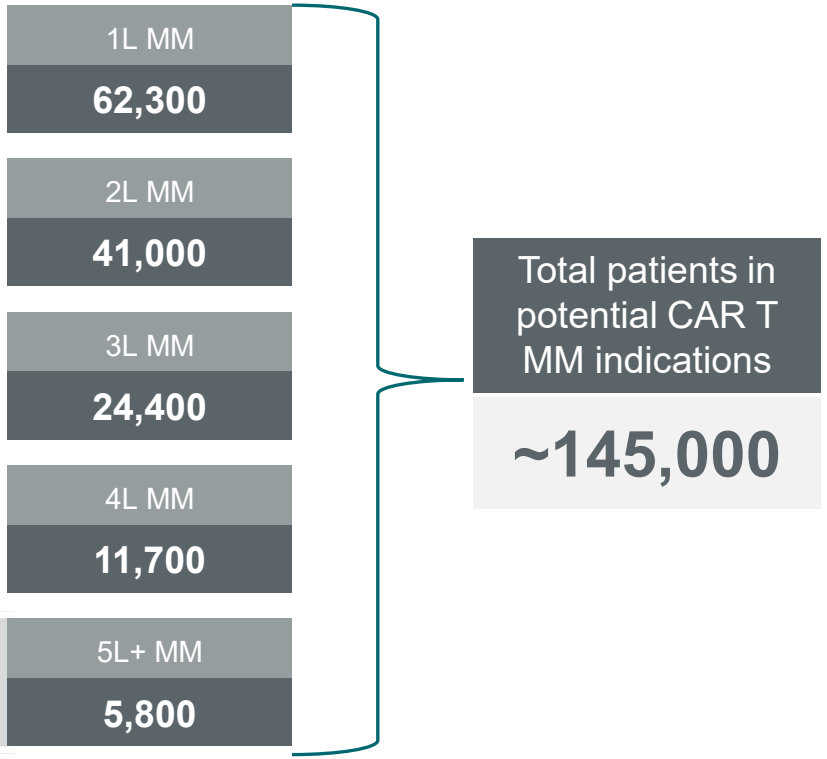
Allogene THERAPEUTICS

AlloCAR T: Potential to Penetrate and Expand the Myeloma Market

Current patient flows*



MM Drug-treated patients (2030)**



Potential Estimated CAR T Sales (2030)

$6B in sales = **~10%** Penetration of MM patients

*Internal market research data on file

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Allogene THERAPEUTICS

AlloCAR T Delivers Across Multiple Fronts

Potential Value Proposition: **First- and Best-in-Class AlloCAR T Products**

Simplifying the Complex

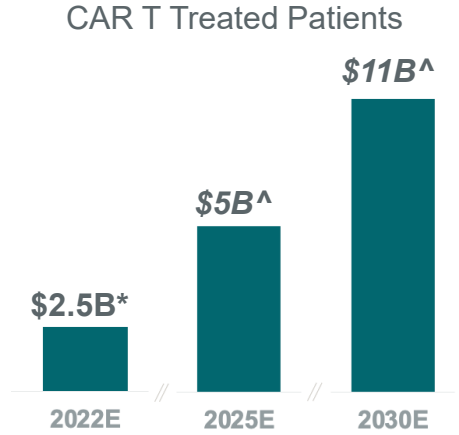
AlloCAR T transforms a complex procedure into **off-the-shelf products**

Meeting Market Demand

Scalable manufacturing capabilities with potential to bring CAR T to **all eligible patients**

Addressing Unmet Need

Potential to provide **durable remissions** with **one-time dosing** while **addressing unmet need in growing markets**



*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 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

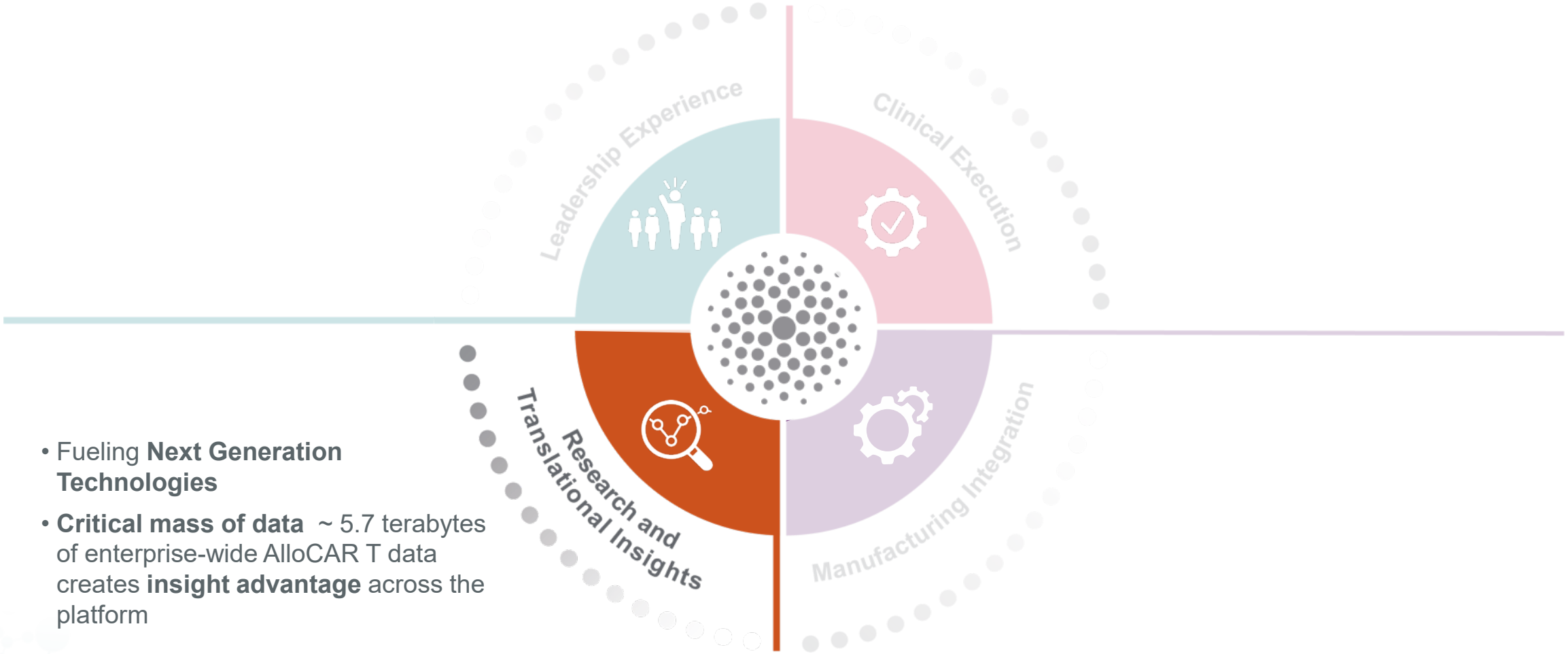
Allogene THERAPEUTICS

Barbra Sasu, Ph.D.

Bringing AlloCAR T to Solid Tumors

Allogene THERAPEUTICS

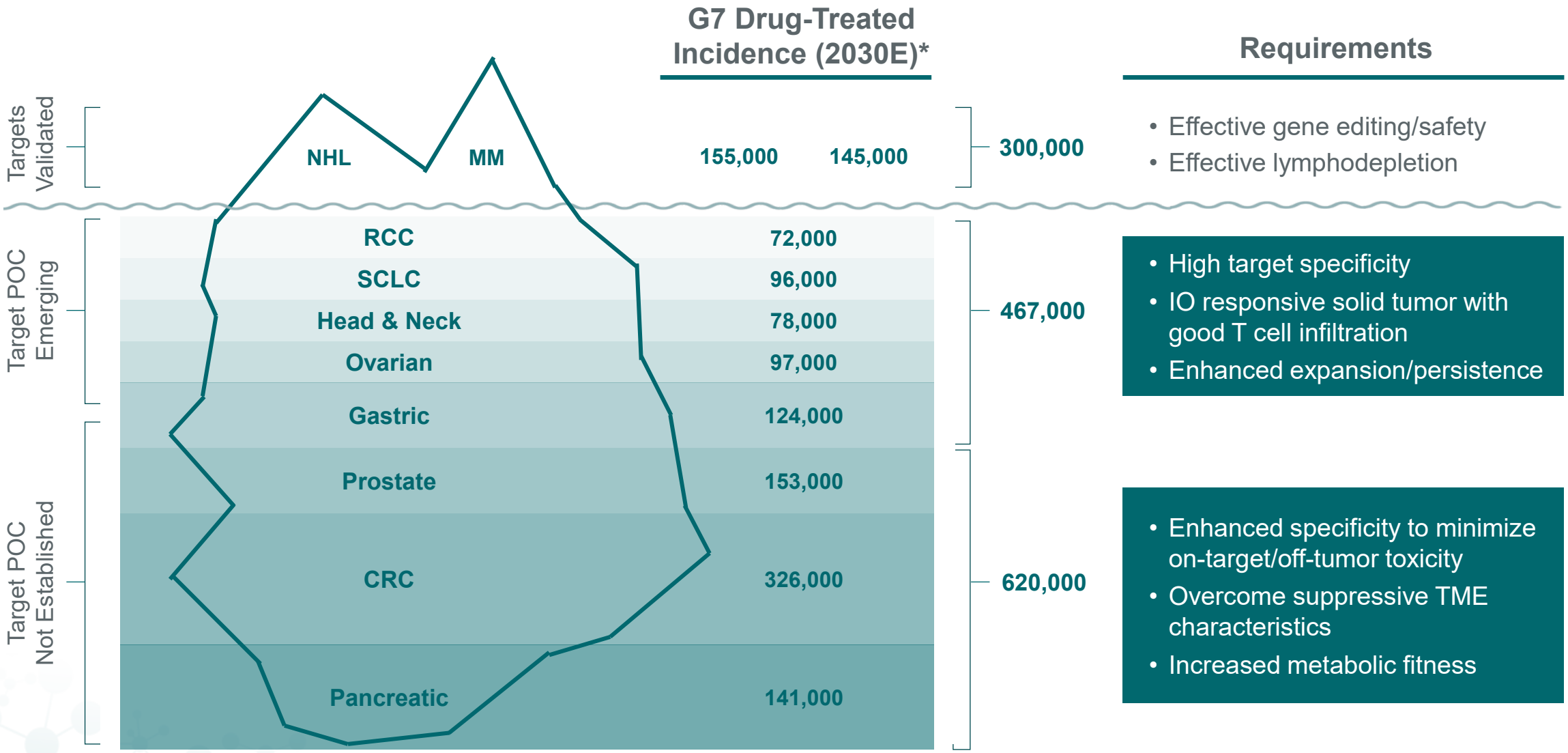
Engine for Innovation, Execution and Growth



- Fueling **Next Generation Technologies**
- **Critical mass of data** ~ 5.7 terabytes of enterprise-wide AlloCAR T data creates **insight advantage** across the platform

Allogene THERAPEUTICS

AlloCAR T: Breaking the Surface Into Solid Tumors



Requirements

- Effective gene editing/safety
- Effective lymphodepletion

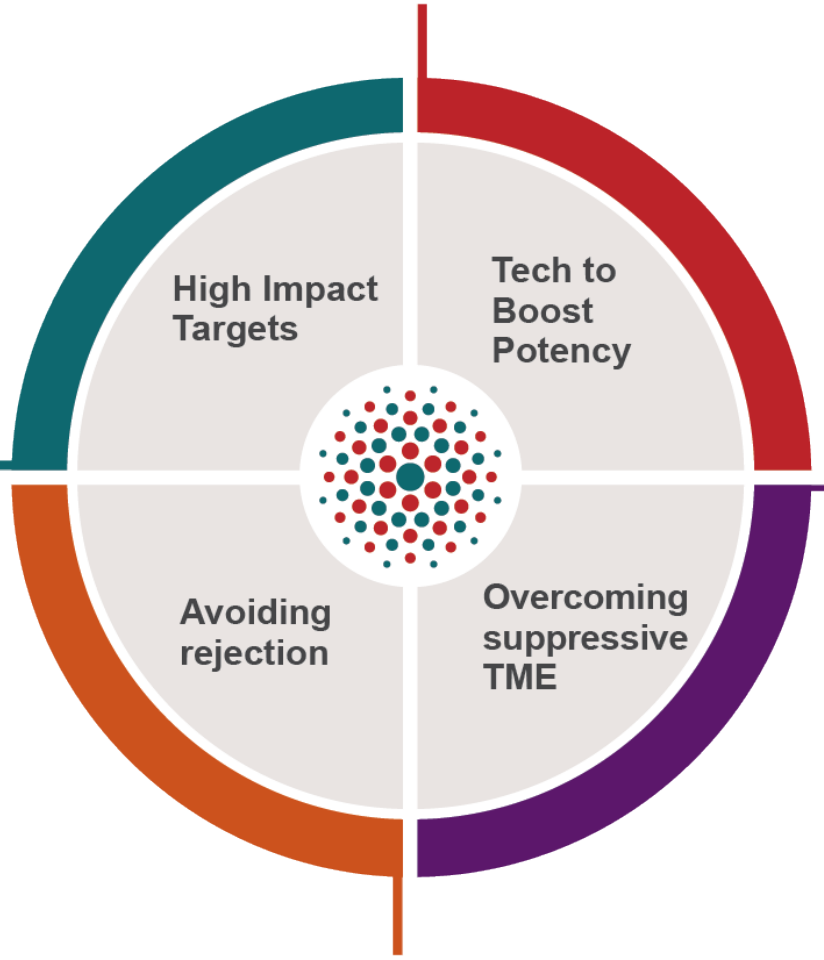
- High target specificity
- IO responsive solid tumor with good T cell infiltration
- Enhanced expansion/persistence

- Enhanced specificity to minimize on-target/off-tumor toxicity
- Overcome suppressive TME characteristics
- Increased metabolic fitness

Allogene THERAPEUTICS

Using Targets and Technologies to Advance AlloCAR T to Solid Tumors

- CD70
- DLL3
- Claudin 18.2



- TurboCAR™ technology
- Site-specific integration platform

- ALLO-647
- Cloak™ Technology
- Dagger™ Technology

- PD-1 and TGFβ axes
- miCAR™ Technology

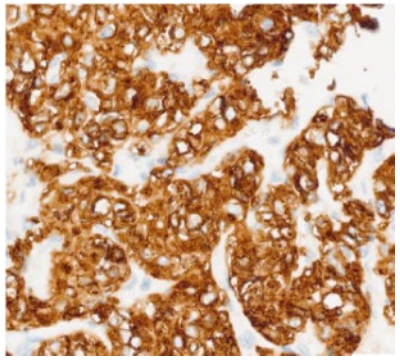
miCAR™ is a trademark of Antion

Allogene THERAPEUTICS

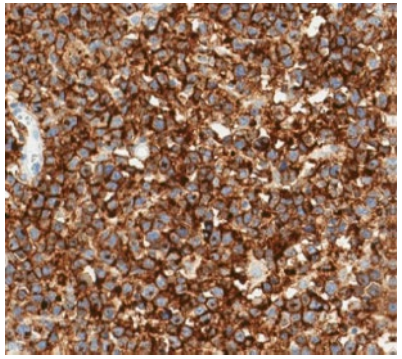
CD70 is an Attractive Target for RCC and Heme Malignancies

Expression in heme and solid tumors but is also present on normal lymphocytes

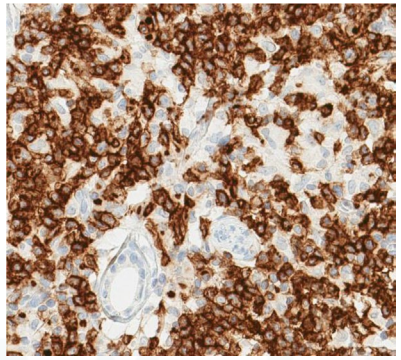
Renal cell carcinoma



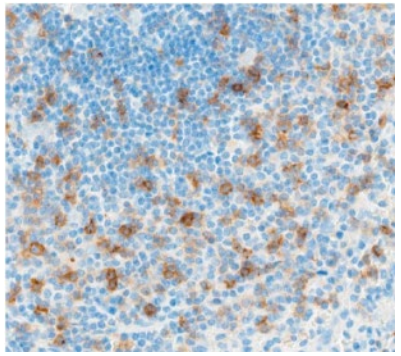
LBCL



T cell lymphoma



Activated lymphocytes in normal spleen



- Renal cell carcinoma is an IO responsive solid tumor with good T cell infiltration
- CD70 expression is high and homogeneous and observed in ~80% percent of ccRCC[1]
- Expression on heme malignancies and additional solid tumors
- Normal tissue expression of CD70 is confined to limited immune cells
  - Subset of dendritic cells
  - Activated lymphocytes (a fraction of total lymphocytes)

1. Ruf et al., *Clin Can Res.* 2015

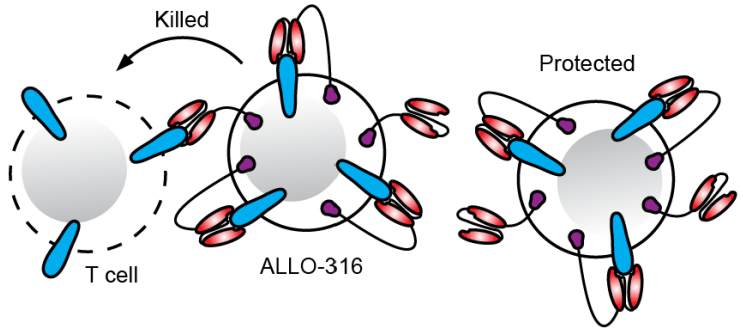
Allogene THERAPEUTICS

ALLO-316 Selected to Enhance Potency and Avoid Exhaustion

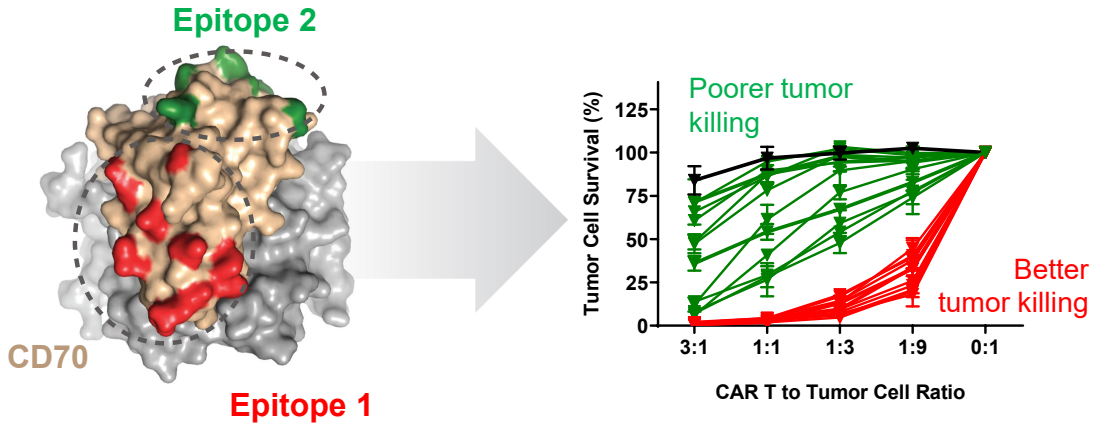
Activation induces CD70 expression on T cells

CD70 expression during CD70 CAR production causes fratricide and exhaustion

Candidate CARs capable of masking CD70 on their surface were selected to avoid fratricide and exhaustion

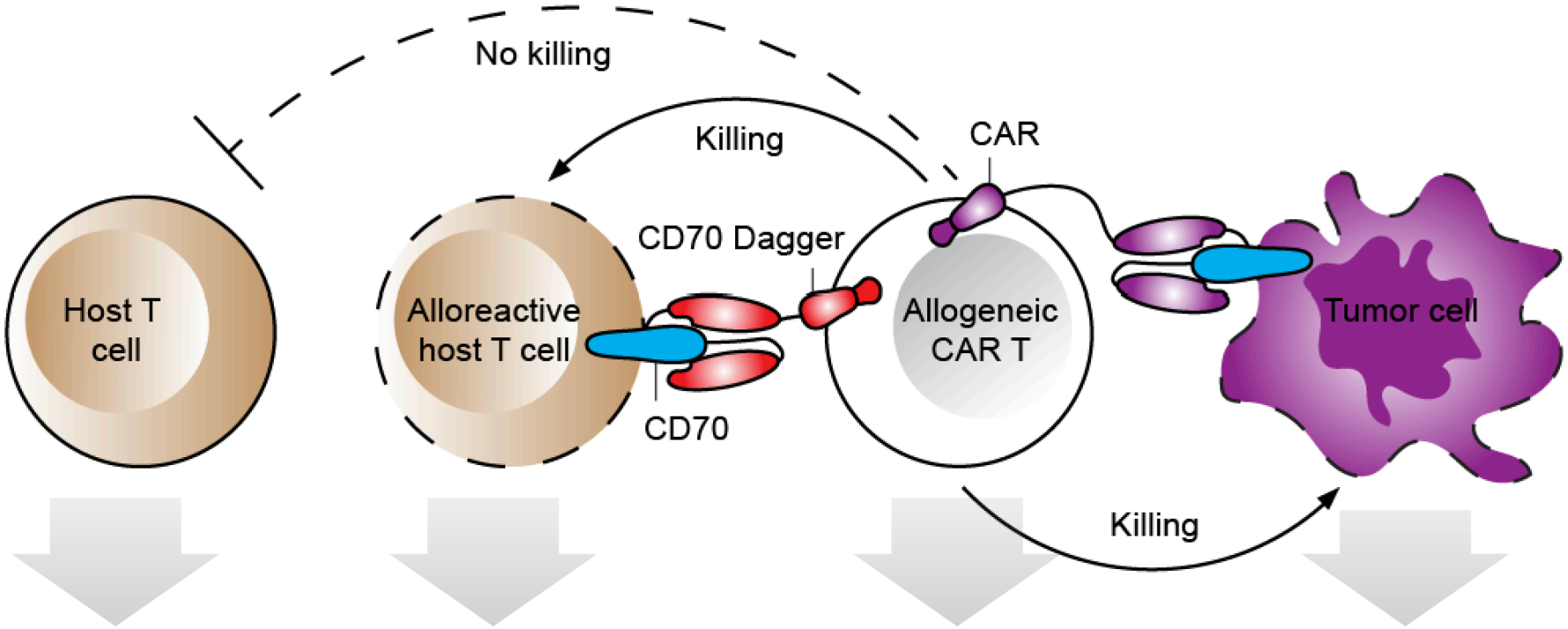


ALLO-316 epitope drastically enhances potency



Allogene THERAPEUTICS

Using Anti-CD70 CAR as a Dagger to Eliminate Alloreactive Cells and Enhance Persistence



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

Allogene THERAPEUTICS

Ritesh Kotecha, M.D.

ALLO-316: The TRAVERSE Trial

Allogene THERAPEUTICS

ALLO-316: Opportunity to Address Large Unmet Need in RCC

Key Unmet Need in Renal Cell Carcinoma

Large patient population with poor survival outcomes in advanced setting

Lack of therapeutic options and meaningful efficacy in post-ICI/TKI patients

Opportunity to improve clinical outcome by patient selection

Opportunities for ALLO-316

- ~72,000 drug-treated advanced RCC patients*
- 5-year survival ~15%**

- ~15,000 drug-treated 3L+ patients, most expected to have had prior ICI/TKI therapy*
- Tivozanib, the only drug with pivotal data in prior ICI/TKI patients approved for the 3L+ setting, has ORR <20% and mPFS <6mo***

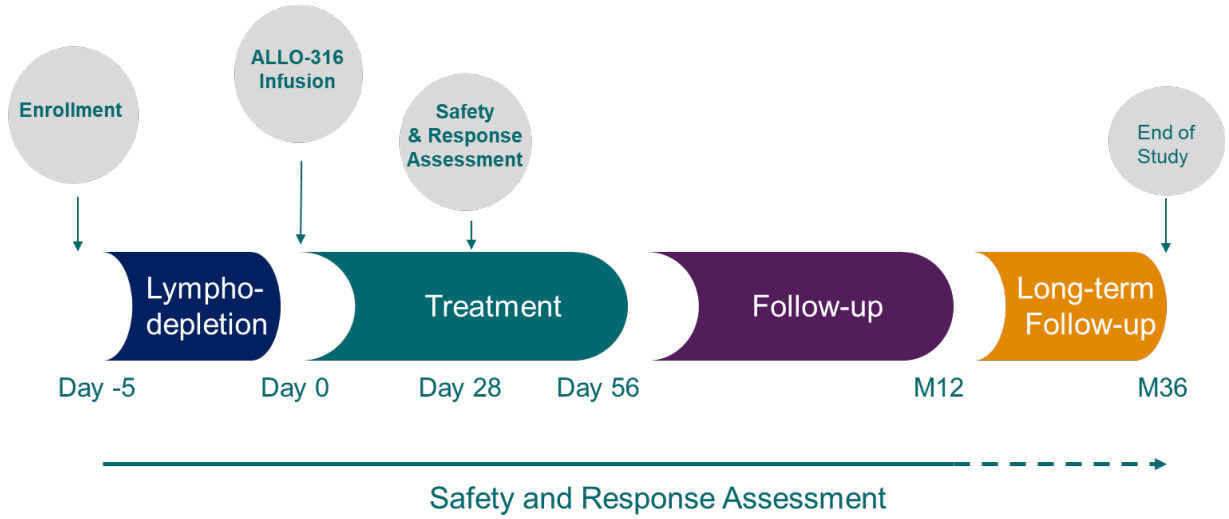
- ~80% of patients are CD70+ ****

Sources: *© 2022 DR/Decision Resources, LLC. All rights reserved. Reproduction, distribution, transmission or publication is prohibited. Reprinted with permission (2030 G7 major market epidemiology), **SEER, ***tivozanib PI, **** Ruf et al., *Clin Can Res.* 2015

Allogene THERAPEUTICS

TRAVERSE: Moving AlloCAR T™ into Solid Tumors (RCC)

- Key Objectives:
  - Establish safety and tolerability
  - Determine the recommended cell dose
  - Investigate lymphodepletion sparing conditioning
- Endpoints
  - Primary: Safety and Tolerability
  - Secondary: Anti-tumor Activity, PK/PD
- Design: Dose Escalation
  - 3+3 design
  - Test up to 4 cell doses 40M to 240M cells



	DL1	DL2	DL3	DL4*
Cell Dose (CAR+ T cells)	40 x 10^6	80 x 10^6	120 x 10^6	240 x 10^6

Conditioning Regimen	FCA	FC
Fludarabine	30 mg/m^2/day x 3 days	
Cyclophosphamide	300 mg/m^2/day x 3 days	
ALLO-647	30 mg	-

*Optional

Allogene THERAPEUTICS

ALLO-316 TRAVERSE 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
- Seventeen patients have been treated across three cell doses and two lymphodepleting regimens
- Patients were heavily pretreated with a median of 3 prior lines of therapy
- All patients had stage IV disease with metastatic disease in lungs (41%), lymph nodes (12%), bone (12%) and liver (12%) among others

Data Extract: November 17, 2022

Allogene THERAPEUTICS

ALLO-316 Safety Profile

TEAE of Interest†	All Patients (N=17)	
	All Grs n (%)	Gr 3+ n (%)
Cytokine Release Syndrome	11 (65)	1 (6)
Neurotoxicity‡	3 (18)	0
ICANS	0	0
Graft-versus-Host Disease	0	0
Infection§	9 (53)	5 (30)
Prolonged Gr3+ Cytopenia	-	3 (18)

- Generally manageable safety profile
  - No GvHD
  - One DLT of liver enzyme elevation 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

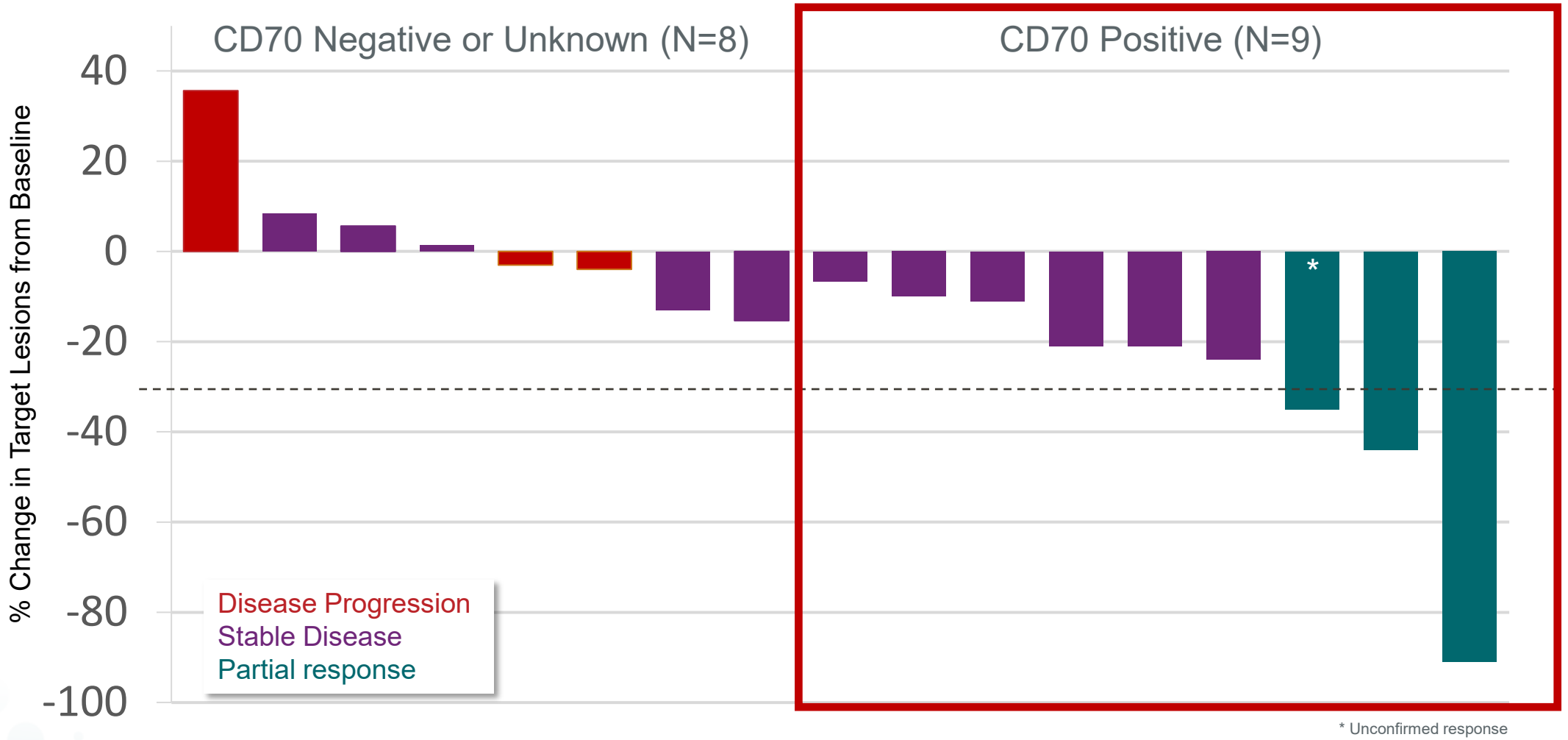
- 13 (77%) of patients experienced an SAE
- Gr 3+ adverse events (AEs) occurred in 16 (94%) of all patients, predominantly cytopenias

† Number of patients with AE occurring from the start of study drug up to subsequent anti-cancer therapy. For patients reporting more than one AE within a preferred term, only one AE with the maximum grade is reported
‡ Events of NT identified using Neurologic toxicities include preferred terms within broad and narrow scope of Noninfectious encephalopathy/delirium SMQ.
§ All infections (bacterial, fungal, and viral) included

Data Extract: November 17, 2022

Allogene THERAPEUTICS

Preliminary Data Indicate ALLO-316 Made CD70+ Tumors Shrink



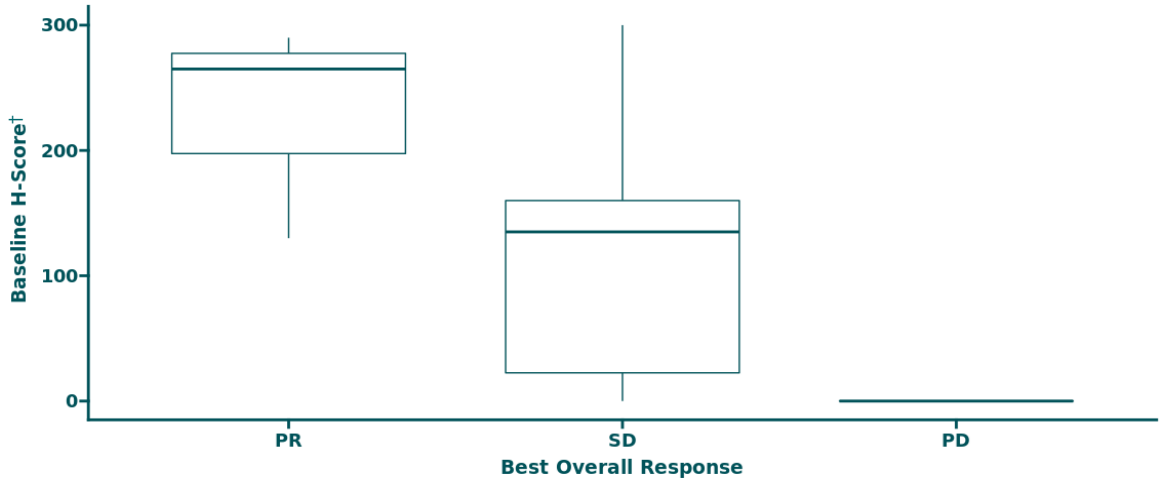
* Unconfirmed response

Data Extract: November 17, 2022

Allogene THERAPEUTICS

ALLO-316 Response Rates Improved with Higher CD70 Expression

	All Patients (n=17)	CD70+ Patients (n=9)
ORR*, n (%)	3 (18)	3 (33)
DCR, n (%)	14 (82)	9 (100)
PR, n (%)	3 (18)	3 (33)



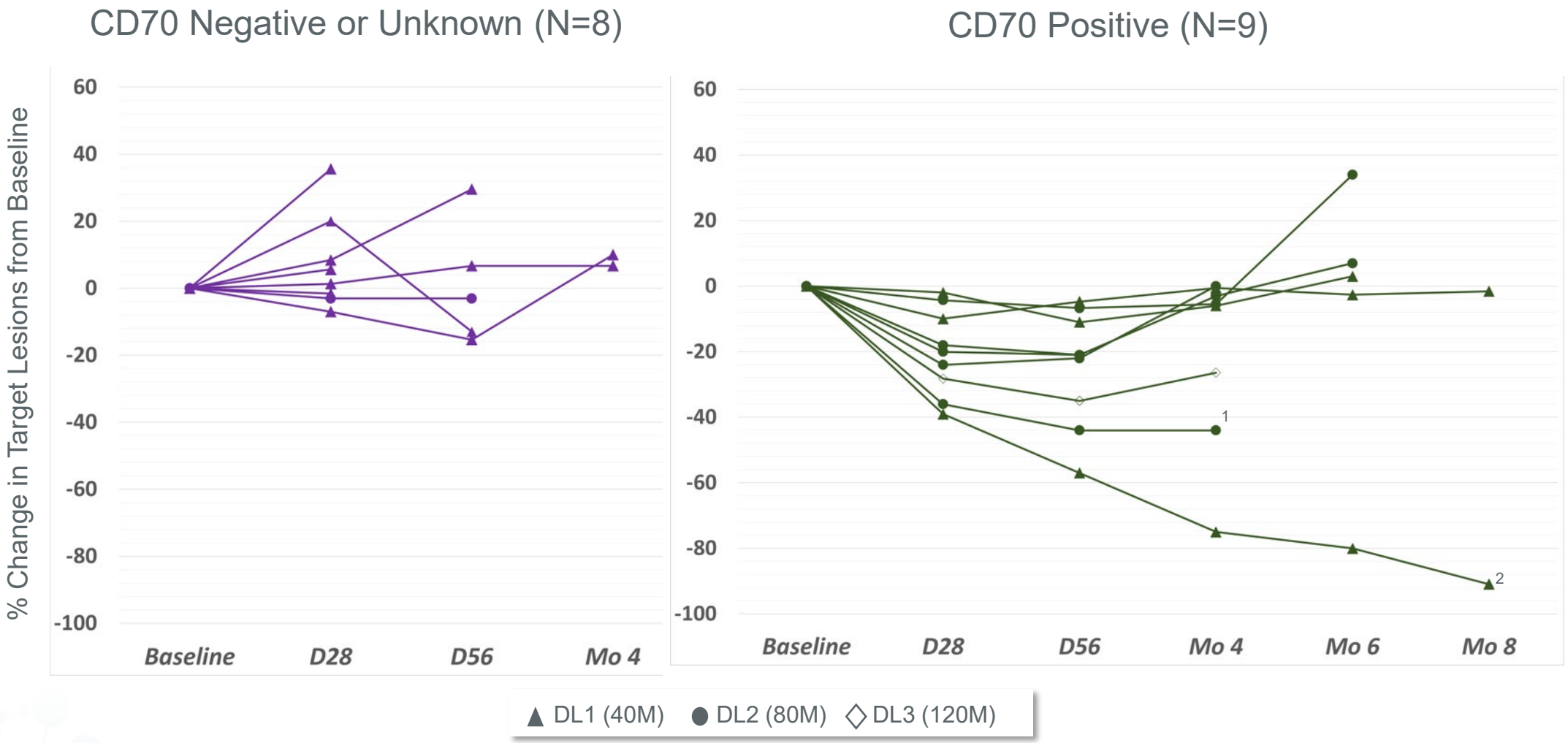
* Response rates include two confirmed and one unconfirmed responses; median follow-up time of 5.4 months
† H-Score is the weighted CD70 expression on a scale of 0-300; H-score = CD70 intensity x % positivity

- 18% overall response rate (ORR) and 82% disease control rate (DCR) across all patients
- Three of nine patients with CD70 expression had >30% reduction in tumor burden
  - Responses include 2 PRs and one unconfirmed PR and correlated with higher CD70 expression as determined by immunohistochemistry (IHC)
- An *in vitro* companion diagnostic (IVD) assay has been developed for use in determining CD70 expression levels
  - TRAVERSE is now deploying the IVD assay for patient selection

Data Extract: November 17, 2022

Allogene THERAPEUTICS

Potential for Deepening of Response Over Time

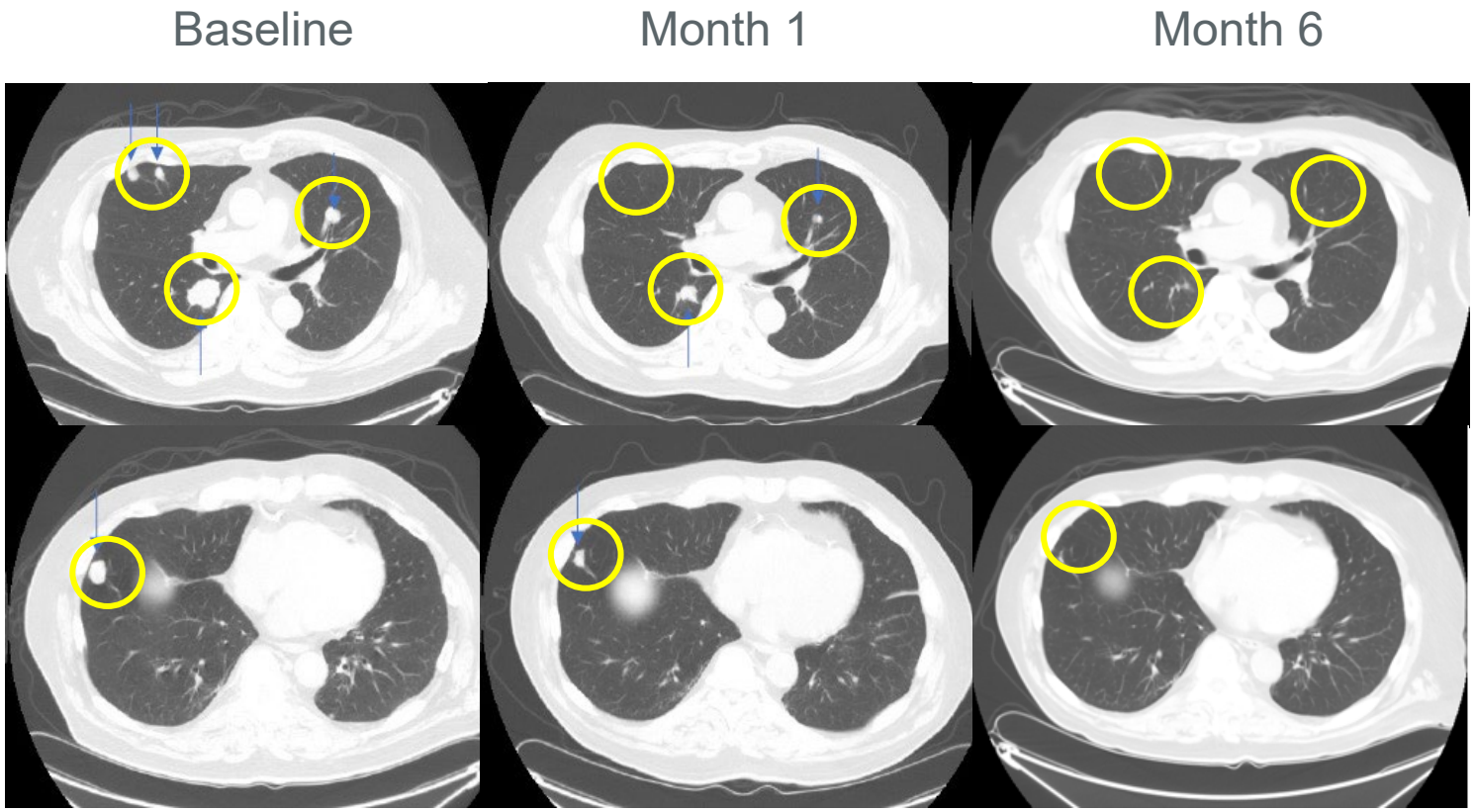


[1] Growth of non target lesion at month 4 (PD)
[2] New lesion at month 8 (PD); patient has been retreated and remains on study

Data Extract: November 17, 2022

Allogene THERAPEUTICS

ALLO-316 Case Study: Durability with Deepening Response



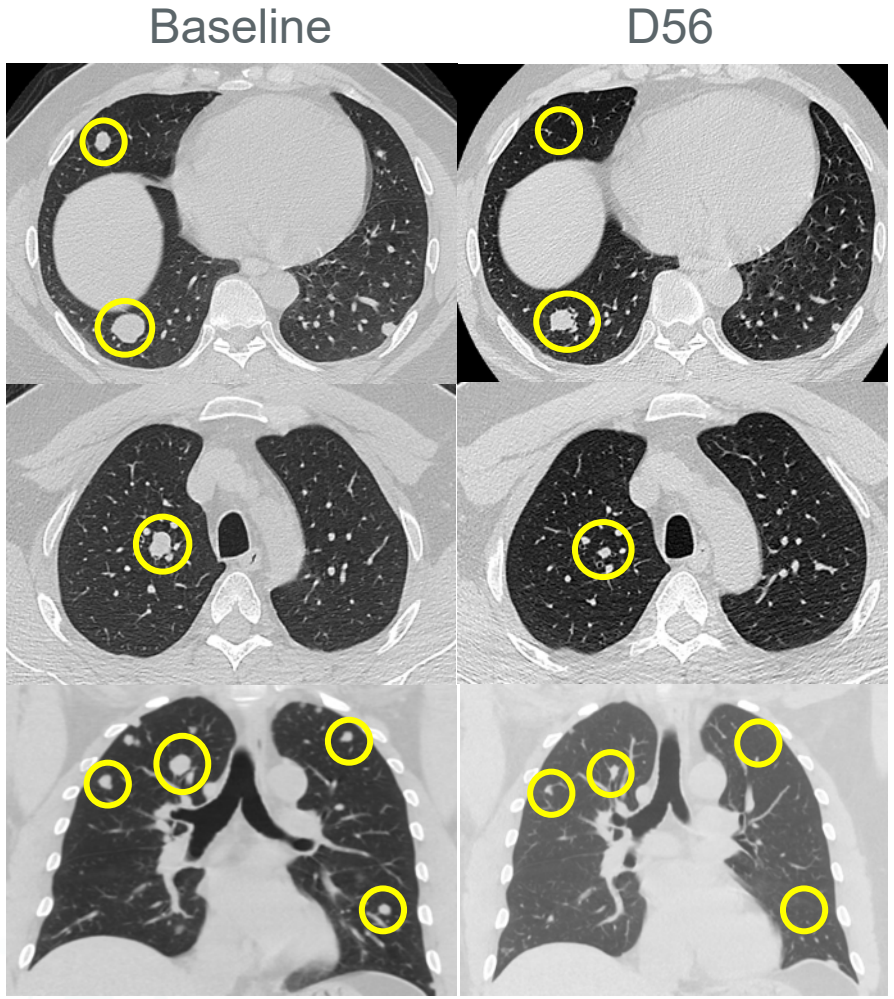
Partial Response

- 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 potential durability of response with ALLO-316

Data Extract: November 17, 2022

Allogene THERAPEUTICS

Case Study: ALLO-316 Can Target Multiple Tumors



Partial Response

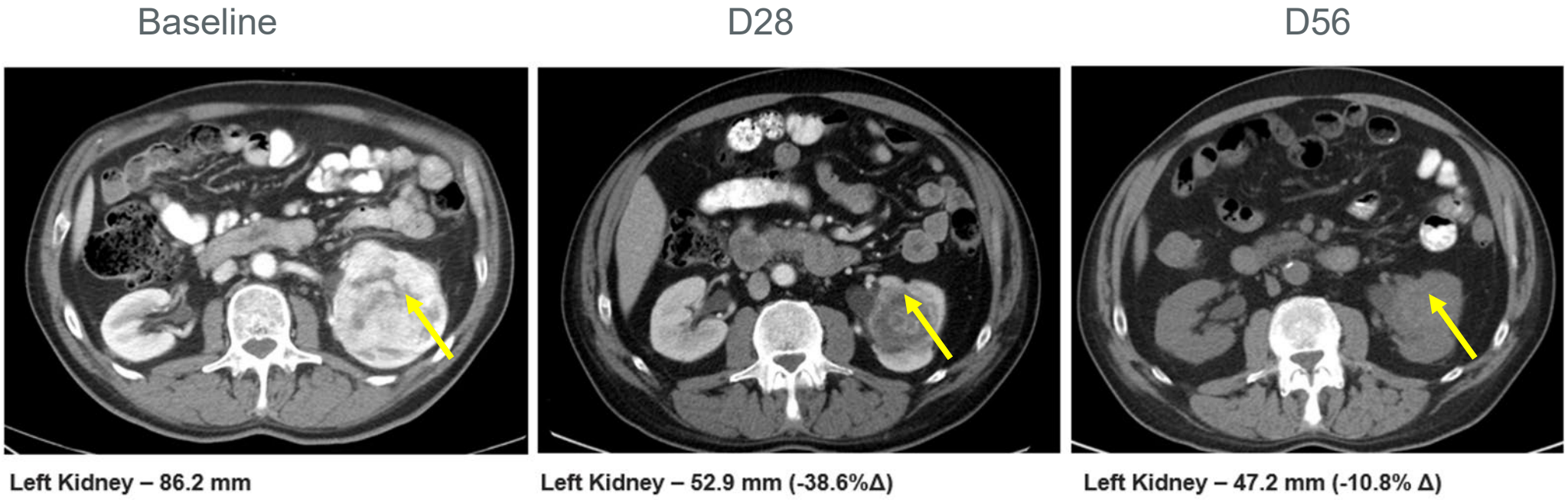
- 50-year-old male with metastatic RCC to the lungs, refractory to checkpoint blockade, angiogenesis inhibitors
- Treated with FC and 120M CAR+ cells
- Completed 28-day evaluation window without dose limiting toxicity
- Responded with stable disease at month 1 (28% decrease from baseline) and deepened to an unconfirmed partial response (35% decrease from baseline) at day 56

Data Extract: November 17, 2022

Allogene THERAPEUTICS

Case Study: ALLO-316 Can Target Primary Renal Tumors

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



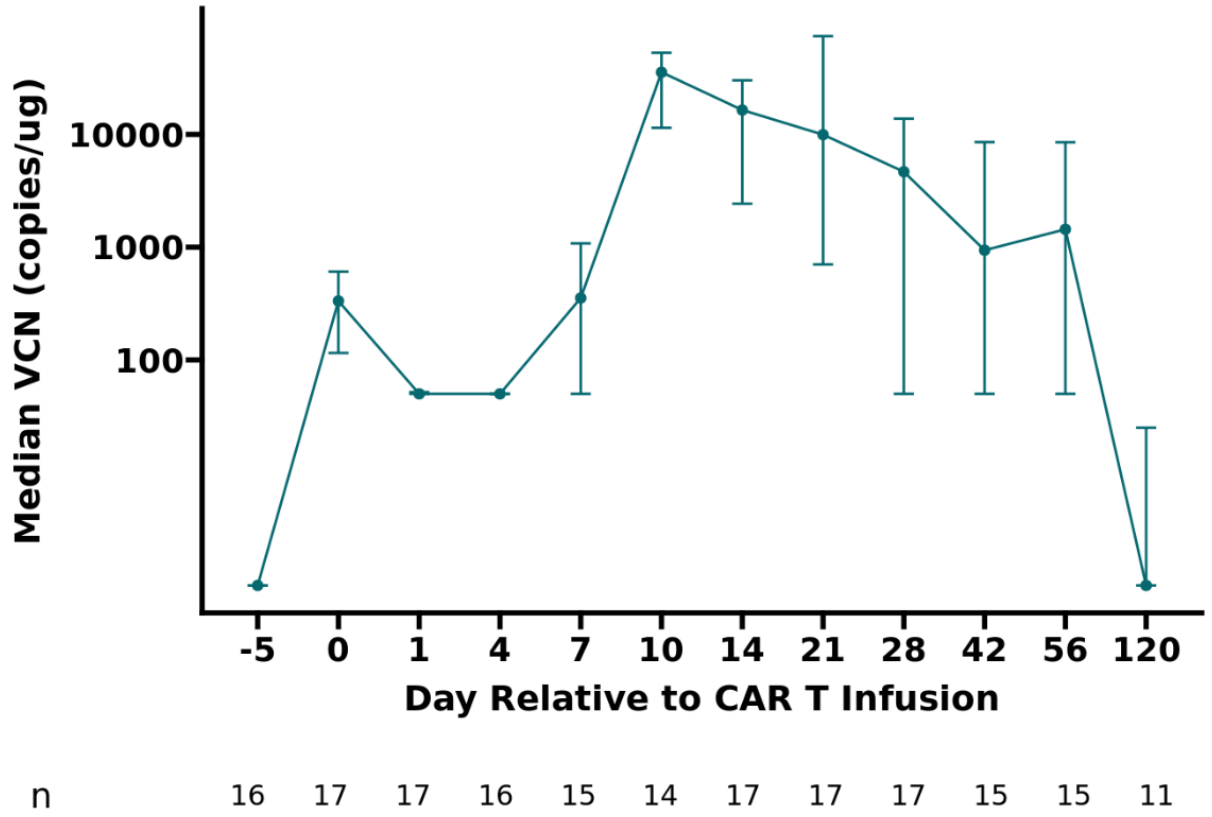
Stable Disease

- 70-year-old male with metastatic RCC to adrenal and bone, refractory to immune checkpoint inhibitors and VEGF-targeted therapy
- Treated with FCA and 80M CAR+ cells

Data Extract: November 17, 2022

Allogene THERAPEUTICS

ALLO-316 Robust Cell Expansion & the Unique Dagger™ Effect
Leveraging for Next Gen AlloCAR T Platform

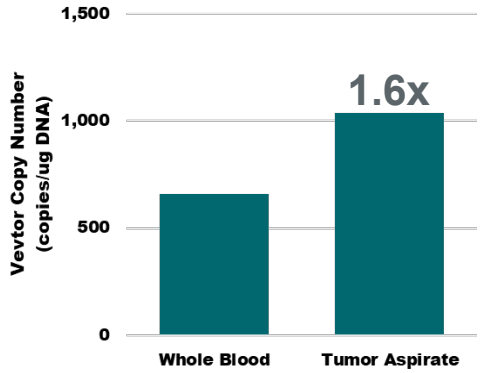


- High CAR T expansion was observed in all patients, regardless of conditioning regimen
- Consistent and significant CAR T expansion observed through Day 56; in some patients the CAR T cells persisted up to 120+ days
- Cell dose dependent expansion was not observed within the dose levels tested (40 to 120 x 10^6 CAR+ cells

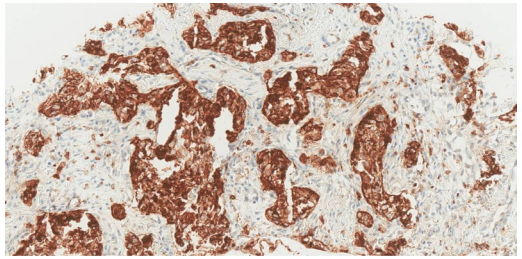
Data Extract: November 17, 2022

Allogene THERAPEUTICS

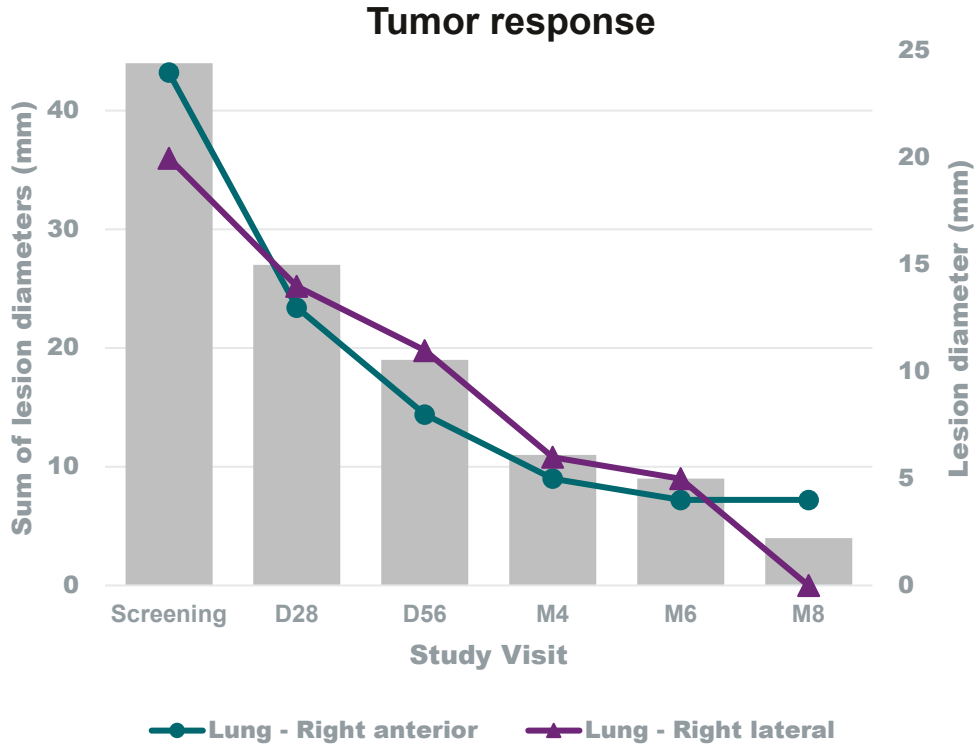
Post Infusion Tumor Biopsy: Presence of CAR T Cells in Excess of Whole Blood in Responding Tumor



Vector copy number* in lung metastasis



CD70 staining in tumor biopsy at 10 days post infusion



Lesions in lungs continued to decrease through month 8

*Sample taken at day 10 post ALLO-316

Data Extract: November 17, 2022

Allogene THERAPEUTICS

ALLO-316 Summary

- TRAVERSE demonstrates feasibility of using allogeneic CAR Ts to treat solid tumors
- ALLO-316 has shown manageable adverse events
- Anti-tumor activity observed in CD70 expressing RCC with three of nine patients responding to ALLO-316
  - Responses correlated with higher CD70 expression
- In vitro diagnostic (IVD) screening now being deployed to select patients with CD70 expression
- Robust ALLO-316 cell expansion at all cell doses illustrates a potential dagger effect
- TRAVERSE continues to explore cell dose and lymphodepletion regimen in CD70 positive RCC patients

AlloCAR T for RCC

David Chang, M.D., Ph.D.
Moderator

Arie Belldegrun, M.D.

Executive Chairman and Co-Founder of Allogene

Director & Founder, UCLA Institute of Urologic Oncology; Prof of Urology, Research; Chief, Division of Urologic Oncology, Emeritus

Malcolm K. Brenner, M.D., Ph.D.
Founding Director, Center for Cell and Gene Therapy, (Baylor College of Medicine, Texas Children's Hospital and Houston Methodist Hospital)

Ritesh Kotecha, M.D.

Assistant Attending Physician Memorial Sloan Kettering Cancer Center

Robert J. Motzer, M.D.

Section Head, Kidney Cancer, Genitourinary Oncology Service; Jack and Dorothy Byrne Chair in Clinical Oncology (Memorial Sloan Kettering Cancer Center)

Treatment Options are Limited for 2/3L+ RCC Patients

	Tivozanib# Phase 3 N=175	**cabozantinib*** Phase 3 N=330	**Nivolumab+** Phase 3 N=410	**lenvatinib + everolimus**** Phase 2 N=51
Line of therapy	3L+	2L+	2L+	2L+
Patient Population	Failed 2-3 systemic treatments (26% prior CPI/VEGFI)	≥1 prior anti-angiogenic therapy (<10% prior CPI)	1-2 prior anti-angiogenic therapies; No prior CPI	Prior anti-angiogenic therapy; No prior CPI
mPFS	5.6mo (HR 0.73)	7.4mo	4.6mo	14.6mo
ORR	18%	17%	21.5%	37%
DCR	73%	Not reported	Not reported	Not reported
Gr3+ Most Frequent AE Summary	Hypertension: 24% Fatigue: 13%	Hypertension: 16% Diarrhea: 11% Fatigue: 9% PPE: 8%	Fatigue: 6% Back pain: 3% Diarrhea: 2%	Diarrhea: 19% Fatigue: 18% Hypertension:13% Renal failure: 10%

#FOTIVDA USPI. Healthcare Professionals. (n.d.). FOTIVDA. Retrieved November 22, 2022, from https://www.fotivdahcp.com. TIVO3

*CABOMETYX USPI. METEOR; mPFS only reported for first 375 randomized patients. Thomas Powles, Robert J Motzer, Bernard Escudier, Sumanta Pal, Christian Kollmannsberger, Joanna Pikiel, Howard Gurney, Sun Young Rha, Se Hoon Park, Poul F Geertsen , Marine Gross-Goupil, Enrique Grande, Cristina Suarez, David W Markby, Alan Arroyo, Mark Dean, Toni K Choueiri, Daniel George; Outcomes based on prior therapy in the phase 3 METEOR trial of cabozantinib versus everolimus in advanced renal cell carcinoma, https://pubmed.ncbi.nlm.nih.gov/30197417/

+OPDIVO USPI. Checkmate-025. Motzer, R. J., Escudier, B., McDermott, D. F., George, S., Hammers, H. J., Srinivas, S., Tykodi, S. S., Sosman, J. A., Procopio, G., Plimack, E. R., Castellano, D., Choueiri, T. K., Gurney, H., Donskov, F., Bono, P., Wagstaff, J., Gauler, T. C., Ueda, T., Tomita, Y., & Schutz, F. A. (2015). Nivolumab versus Everolimus in Advanced Renal-Cell Carcinoma. New England Journal of Medicine, 373(19), 1803–1813. https://doi.org/10.1056/nejmoa1510665.

**LENVIMA USPI. Study 205

^Includes 1 unconfirmed response

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.

Allogene THERAPEUTICS

Key Questions for ALLO-316 in Solid Tumors

- ☑ Can ALLO-316 be safely administered?
- ☑ Can CAR T cells infiltrate and expand in solid tumors?
- ☑ Can ALLO-316 induce objective responses in 3L RCC?
- ❑ What is the optimized ALLO-316 dose and lymphodepletion regimen?
- ❑ Can IVD screening select for RCC patients with highest likelihood of response?
- ❑ Is there synergy between ALLO-316 and checkpoint inhibition?
- ❑ Can ALLO-316 be directed at other CD70 expressing solid tumors and hematological cancers?

RCC Panel

David Chang, M.D., Ph.D.

Allogene: Executing on Our Vision

Realizing the Potential of Allogeneic CAR T through Innovation and Execution

$11B[1] in Projected 2030 Sales Estimates CAR T Use in Only a Fraction of Eligible NHL and MM Patients

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 *Path to Pivotal*

ALLO-715

- First & only allogeneic CAR T trial to demonstrate potential in MM
- Expansion cohorts deliver response rates that support advancement
- Regulatory discussions planned for potentially pivotal Phase 2 trial

9.2 months

mDOR

24 months

Longest Ongoing Response

CD70 *Leveling Up to Solid Tumor*

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

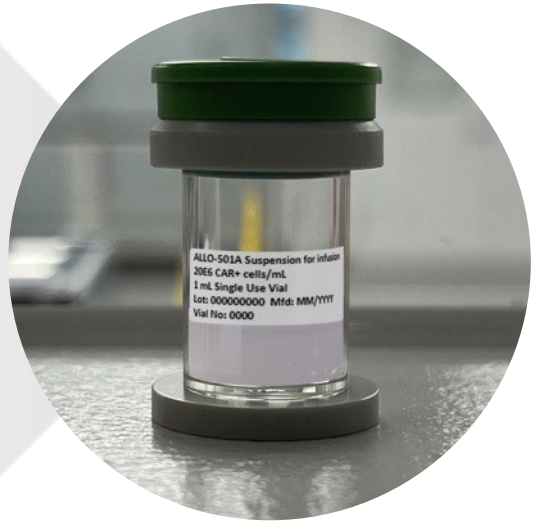
CD19 Data Cutoff Date: October 25, 2022; ALLO-715 Data Cutoff Date: October 11, 2022, ALLO-316 Data Extract: November 7, 2022

[1]Decision Resources Group estimated autologous CAR T sales in 2030

Allogene THERAPEUTICS

Allogene: The Next Revolution in Cell Therapy

From Vision to Vial



Allogene THERAPEUTICS

Q&A

Allogene® THERAPEUTICS

Leading the Revolution from CAR T Therapies to CAR T Products

Allogene's products utilize Cellectis technologies. ALLO-501 and ALLO-501A are anti-CD19 AlloCAR T™ products being jointly developed under a collaboration agreement between Servier and Allogene based on an exclusive license granted by Cellectis to Servier. Servier grants to Allogene exclusive rights to ALLO-501 and ALLO-501A in the U.S. The BCMA, CD70, FLT3, DLL3 and Claudin 18.2 AlloCAR T programs, which utilize Cellectis technology, are licensed exclusively from Cellectis by Allogene and Allogene holds global development and commercial rights to these AlloCAR T programs