



The Next Revolution in Cell Therapy

Leading Today, Creating Tomorrow

February 25, 2021

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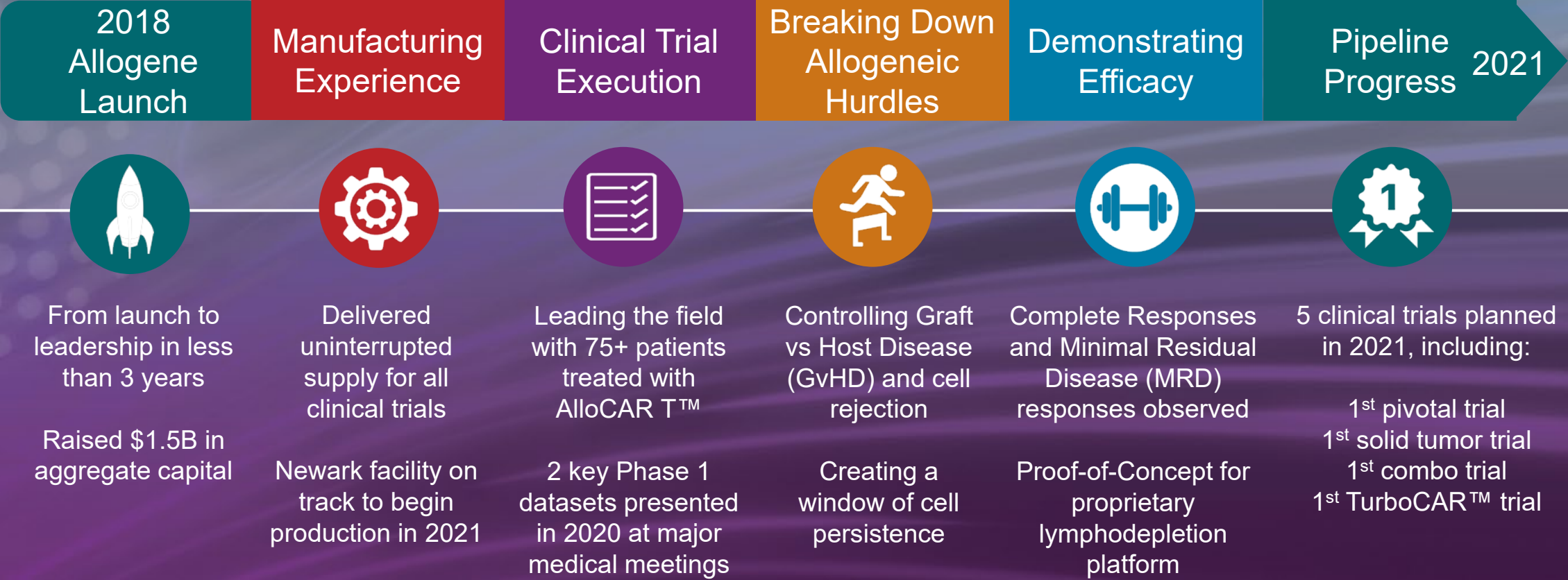
Caution should be exercised when interpreting results from separate trials involving separate product candidates. There are differences in the clinical trial design, patient populations, and the product candidates themselves, and the results from the clinical trials of autologous products may have no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

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Allogene: Singular Focus on Allogeneic Cell Therapy

SUCCESSFUL TRACK RECORD OF EXECUTION



Deep AlloCAR T™ Pipeline Targeting Vast Array of Tumor Types

CATEGORY		PROGRAM	PRE-CLINICAL	PHASE 1	PHASE 2/3 ²
Hematological Malignancies	CD19	ALLO-501 (NHL) ¹	<div></div>	<div></div>	
		ALLO-501A (NHL) ¹	<div></div>	<div></div>	
	BCMA	ALLO-715 (MM)	<div></div>	<div></div>	
		ALLO-715 + nirogacestat (MM) ³	<div></div>	<div></div>	
		ALLO-605 (TurboCAR™/MM)	<div></div>		
		ALLO-316 (CD70/AML)	<div></div>		
		ALLO-819 (FLT3/AML)	<div></div>		
Solid Tumors		ALLO-316 (CD70/RCC)	<div></div>		
		DLL3 (SCLC)	<div></div>		
		10 Undisclosed Targets	<div></div>		
Lymphodepletion Agent		ALLO-647 (Anti-CD52 mAb) ⁴	<div></div>	<div></div>	

¹ Servier holds ex-US commercial rights

² Phase 3 may not be required if Phase 2 is registrational; Initiation for ALLO-501A Phase 2 trial expected 2H 2021

³ Allogene Sponsored trial in combination with SpringWorks Therapeutics

⁴ ALLO-647 intended to enable expansion and persistence of allogeneic CAR T product candidates



Innovating CAR T Therapies to Potentially Expand Access & Reduce Cost



Cost

- Scalable and efficient manufacturing
- Potential to treat 100+ patients from a single manufacturing run
- Opportunity to reduce ancillary cost of care associated with autologous therapy



Innovation

- Multiplex gene engineering/editing capabilities
- Opportunity for product optimization



Access

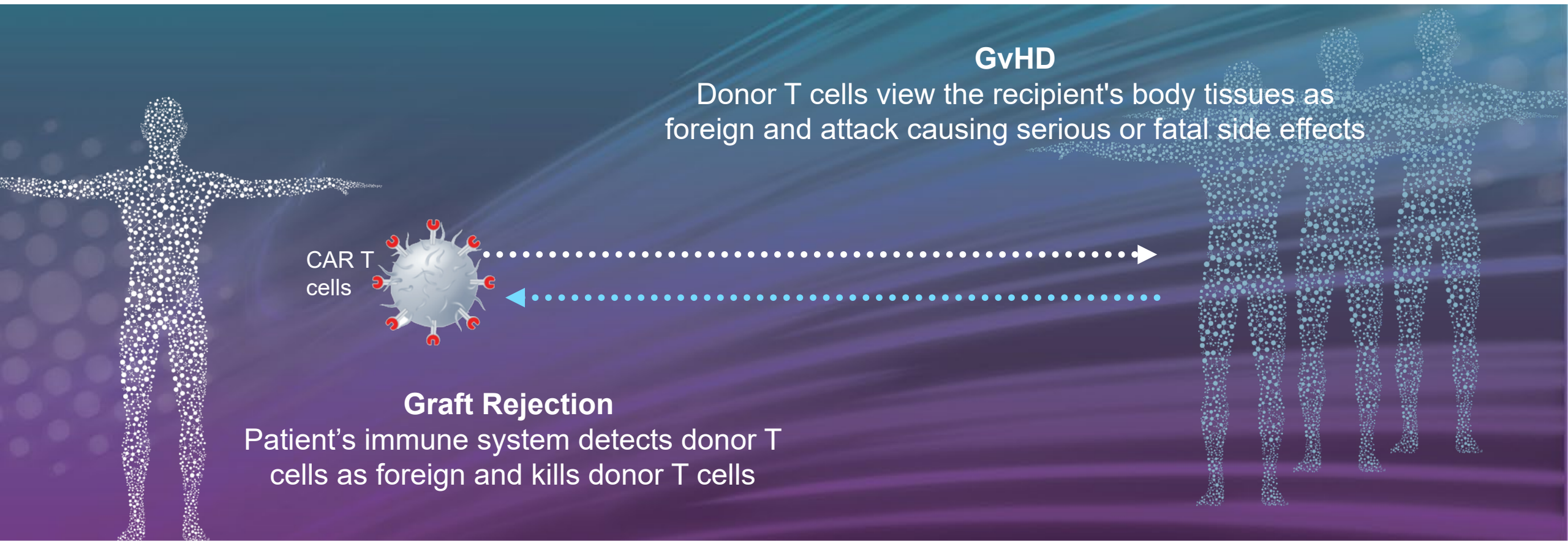
- Potential to treat all eligible patients
- Repeat dosing, if needed
- No need for complex logistics or bridging therapy



Speed/Reliability

- “Off the shelf” for on demand treatment
- Less product variability, made from healthy T cells

Defying Immunity: Overcoming GvHD and Graft Rejection



Allogeneic cell therapy engages the fundamental immunological process of Self vs. Non-Self recognition

ALLO-647 Anchors Novel, Proprietary Approach to Overcoming Rejection

Developed anti-CD52 mAb for use across AlloCAR T pipeline

Phase I trials have demonstrated the ability to selectively enhance lymphodepletion

IP covering CD52 gene knockout in combination with an anti-CD52 mAb



Industrializing Allogeneic Cell Therapy Production: Strategy



Singularly focused AlloCAR T platform development enables speed and minimizes cost



Ownership of manufacturing and testing allows improved process optimization, and control regulatory and compliance



Investment in partnerships with critical suppliers ensures availability of emergent, high-demand materials



ALLO-647 development and production, with dedicated ALLO oversight, preserves focus on AlloCAR T's



Leveraging QTPP framework for product understanding to improve process performance and supports comparability



COGM is shaped by infrastructure, and operationalization choices

Reliable Product Delivery



Industrializing Allogeneic Cell Therapy Production: Infrastructure



Cell Forge 1 (Newark, CA)

- New state-of-the-art facility
- Designed for clinical and commercial manufacturing, analytical testing and distribution of cell therapies
- Construction complete in 2020, first GMP production 2021

South San Francisco Facilities

- Manufacturing process and product development
- Analytical methods for process and product understanding and release
- Quality Assurance and Quality Control



External Network

- Broad CMO and supplier network
- Incorporating external expertise for starting materials, drug substance and drug product manufacturing
- Packaging, labeling, logistics and clinical distribution



CD19 Program: Advancing ALLO-501A to Potential Pivotal Study

Potential to be the First Allogeneic CAR T in Phase 2

ALLO-501 ALPHA Ph1 Trial | Initial Data: ASCO 2020 | Next Update Expected Q2 2021 (ASCO 2021)

Early efficacy competitive with autologous CAR

T: 83% ORR and 67% CR with higher dose ALLO-647 (N=6)

Well tolerated: No GvHD and manageable CRS. Early safety data compared favorably to autologous CAR T

On demand dosing: 5 days from enrollment to treatment vs. 17-54 days for autologous therapies

Biomarker validation: Correlations observed with ALLO-647 lymphodepletion, ALLO-501 cell expansion, and tumor response

Further exploration of dosing: Retreatment and consolidated dosing to potentially optimize outcomes

Cell Dose and LD regimen	ALLO-501 ¹ ALLO-647 90mg (N=6)	Autologous Ph1 Trials in NHL ²	Autologous Ph2 Trials in NHL ³
ORR, n (%)	5 (83%)	64-80%	50-73%
CR, n (%)	4 (67%)	56-60%	32-53%

¹ ASCO June 2020; Autologous CAR T naïve patients

² Kymriah and liso-cel trials include FL and MCL patients; ASH 2015; Schuster, NEJM, 2019; Abramson, ASH 2019

³ Yescarta, Kymriah FDA labeling information and Abramson ASH 2019; Based upon mITT analyses

AE of Interest (≥Gr3)	ALLO-501 Ph1 (N=22)	axi-cel Ph2* (N=101)	tisa-cel Ph2* (N=111)	liso-cel Ph2* (N=269)
Cytokine Release Syndrome	5%	13%	23%	2%
ICANS	-			
Neurologic Events		31%	18%	10%
Graft-versus-Host Disease	-	-	-	-
Infection	9%	23%	25%	12%
Neutropenia	64%	93%	81%	60%
Infusion Reaction	5%**	-	-	-

* Neelapu NEJM 2017, Schuster NEJM 2019, and Abramson ASH 2019

** Attributed to ALLO-647

ALLO-501A ALPHA2 Ph1 Trial | Initial Data: Expected Q2 2021 | Anticipate Pivotal Trial Initiation: 2H 2021



ALPHA2 Study Design and Endpoints

Phase 1/2, Open-label, Multicenter Dose Escalation and Dose Expansion Study

Primary Endpoints

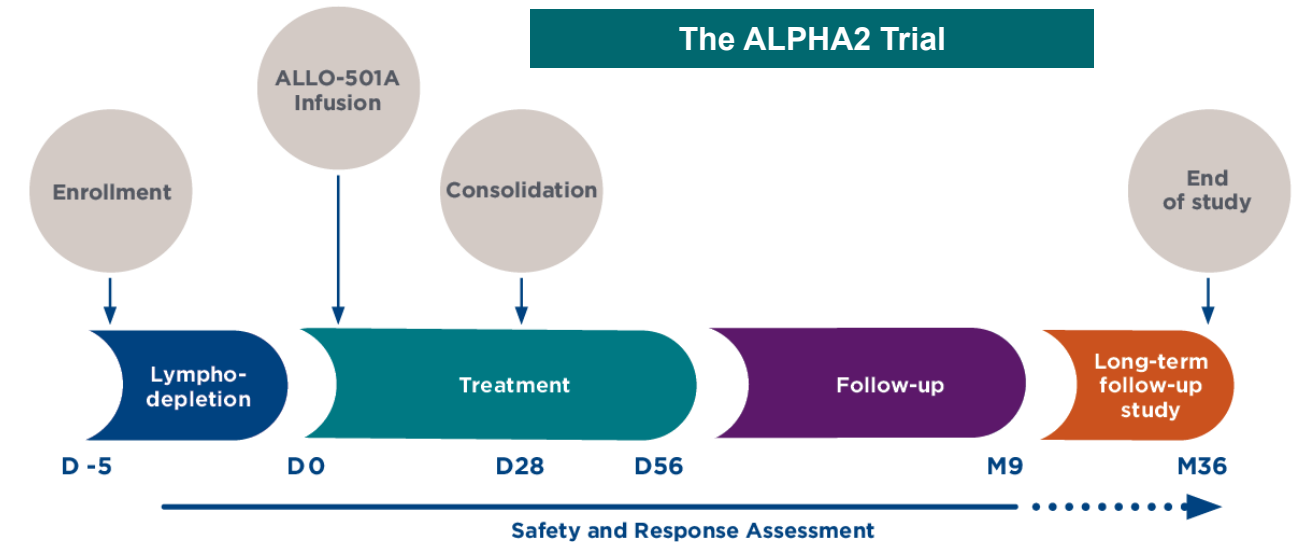
- Safety and dose-limiting toxicity of ALLO-647/Flu/Cy followed by ALLO-501A
- Overall response rate by central imaging review

Key Secondary Endpoints

- Overall response rate by investigator assessment
- ALLO-501A cell kinetics
- ALLO-647 PK

Key Eligibility Criteria

- R/R LBCL (DLBCL, tFL, tMZL, PMBCL, FL 3B)
- At least 2 prior lines of therapy, including an anthracycline and anti-CD20 monoclonal antibody
- ECOG 0 or 1
- Prior autologous CAR T allowed if tumor remains CD19+ and patient had a CR \geq 16 weeks
- Patients with Donor Specific Antibodies are excluded



	DL1 (N=1)	DL2	DL2 Consolidation	DL3
Cell Dose	40 x 10 ⁶ CAR ⁺ T cells	120 x 10 ⁶ CAR ⁺ T cells	120 x 10 ⁶ CAR ⁺ T on D0, and D28 for SD or better	360 x 10 ⁶ CAR ⁺ T cells

- Lymphodepletion Regimen
 - Fludarabine (Flu), Cyclophosphamide (Cy) and ALLO-647



Why Allogeneic Cell Therapy Matters in Multiple Myeloma

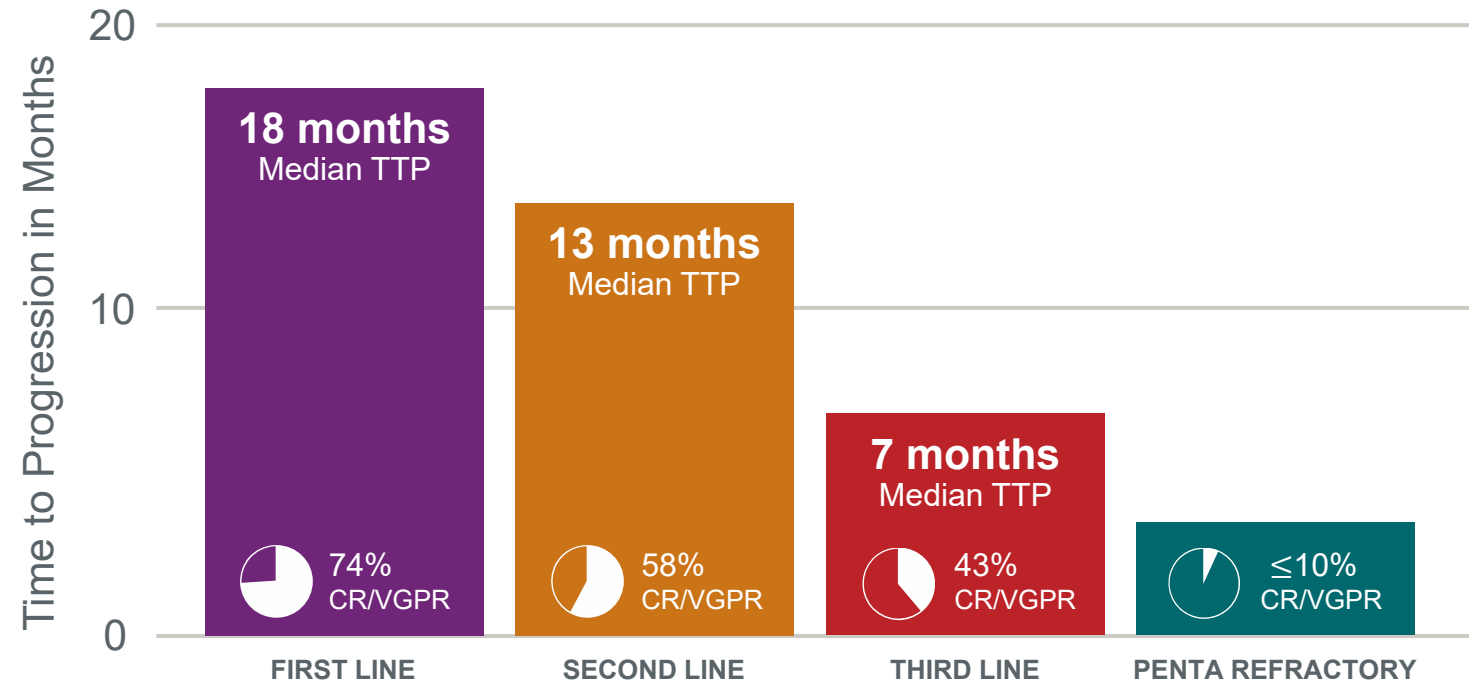


- Multiple myeloma is a progressive disease. Prognosis for patients worsens over time
- Bridging therapy to “control” the disease may increase some cumulative or synergistic toxicities for the patients²



Time is of the essence for patients with rapid progression

Majority of Patients Relapse¹



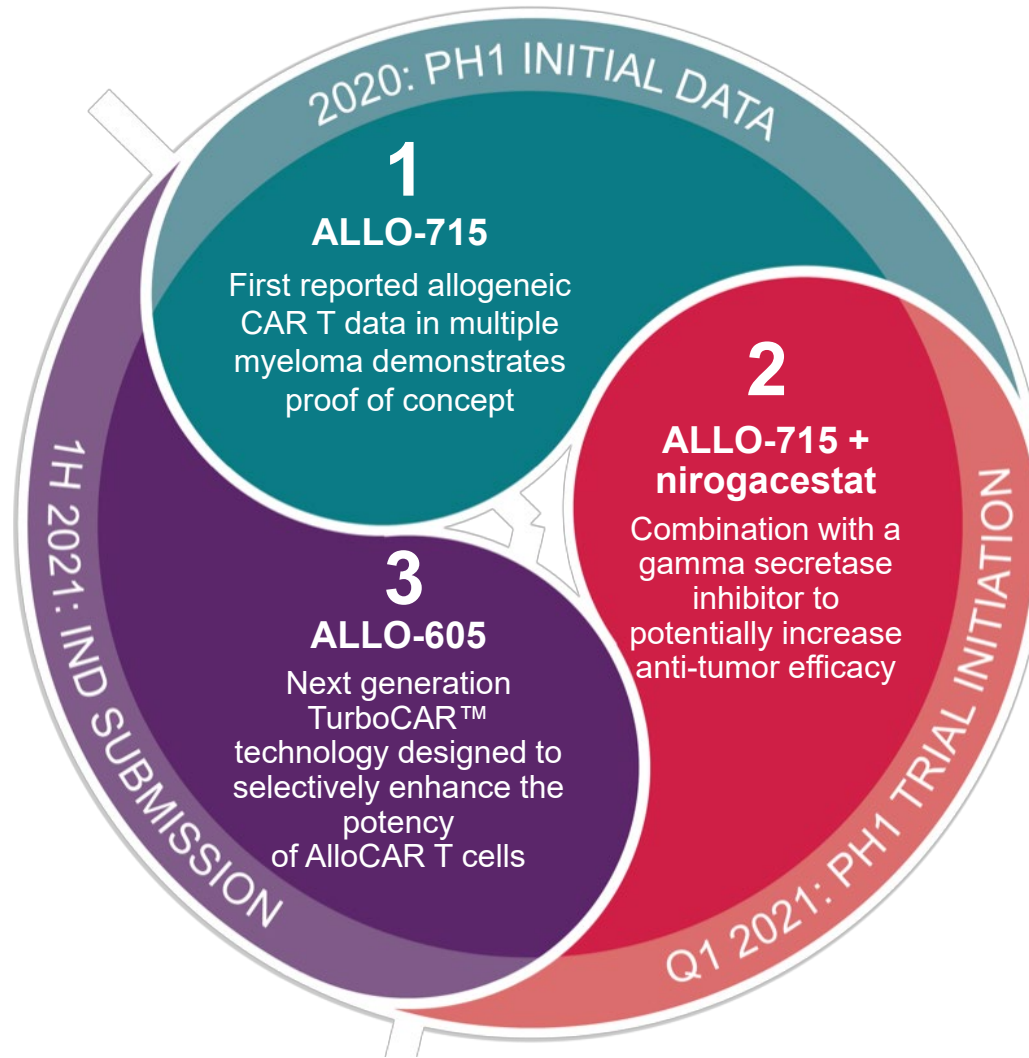
¹Bird SA, Boyd K. Palliat Care Soc Pract. 2019;13:1-13

²Zheng Ping-Pin, et al. Drug Discovery Today June 2018; 23:6; 1175-82

³Gandhi, et al., *Leukemia*. 2019 September ; 33(9): 2266–2275. doi:10.1038/s41375-019-0435-7; TTP based upon conditional mPFS reported, VGPR based on interpolated values



Building an Anti-BCMA AlloCAR T Franchise in Multiple Myeloma



ALLO-715: First AlloCAR T To Demonstrate Feasibility in Myeloma

ALLO-715 UNIVERSAL Ph1 Trial: *Initial Data Readout: ASH 2020*
Next Steps: *Explore further dose escalation and combination with nirogacestat*

Clear benefits associated with an off-the-shelf therapy:

- ~90% of patients treated within 5 days of study enrollment
- Obviates need for bridging therapy prior to dosing

Well tolerated across dose levels:

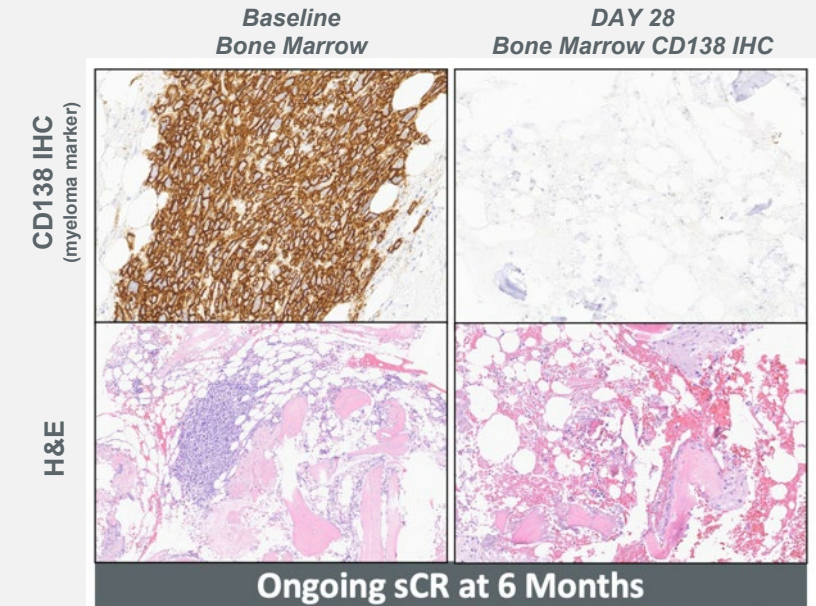
- No GVHD or neurotoxicity (ICANS); manageable grade 1 or 2 CRS
- Infection rate on par with other studies in advanced myeloma

Dose dependent ALLO-715 activity observed in heavily pretreated, refractory patients

- ALLO-715 cell persistence observed through month 4
- 320M cell dose of ALLO-715 (DL3) with FCA lymphodepletion associated with a 60% Overall Response Rate (ORR)
- 5 of 6 VGPR+ patients assessed for MRD status; all were negative

ASH 2020; image on file

ALLO-715 Case Study: Ability to Achieve a Durable Deep Response



9 prior lines of therapy, progressing on last line of therapy

ALLO-715: Initial Data Creates Pathway for Allogeneic CAR T in MM

Initial Safety Compared to BCMA Directed Therapies

	ALLO-715 Ph1 (N=31) ¹	Ide-Cel 300/450M N=128 ²	Orva-Cel 300/450/600M N=62 ³	Cilta-Cel 0.75M/kg N=29 ⁴
Cytokine Release Syndrome (CRS)	45%	84%	89%	93%
CRS (Grade ≥3)	0	5.5%	3%	7%
Neurologic Toxicity	0	18%	13%	10%
Neurologic Toxicity (Grade ≥3)*	0	3%	3%	3%
Infection (Grade ≥3)	16%	NR	13%	21%
Neutropenia (Grade ≥3)	52%	89%	90%	100%
Death from AEs	3%	3%	3%	8%

¹ ASH 2020; ² Munshi, ASCO 2020 (Ide-cel); ³ Mailankody, ASCO 2020 (Orva-cel) ; ⁴ Madduri, ASH 2020 Abstract

Initial Responses Compared to BCMA Directed Therapies

Cell Dose & LD regimen	ALLO-715 320M & FCA (N=10) ¹	Ide-Cel (BB/BMS) 300/450M N=124 ²	Orva-Cel (Juno/BMS) 300/450/600M N=62 ³	Cilta-Cel (JNJ) 0.75M/kg N=97 ⁴
ORR, %	60%	73%	92%	95%
VGPR+ Rate, %	40%	53%	68%	88%
MRD- Rate, % (N Evaluated)	100% (4/4)	78% (80/102)	84% (21/25)	94% (49/52)

¹ ASH 2020; Responses included 2 subjects with only day 14 assessment and 1 subject who converted from a confirmed PR to VGPR (pending confirmation). ; ² Munshi, ASCO 2020 (Ide-cel); ³ Mailankody, ASCO 2020 (Orva-cel) ; ⁴ Madduri, ASH 2020 Abstract

UNIVERSAL: ALLO-715 + Nirogacestat Cohort

Primary Endpoints

- Safety and tolerability of ALLO-715 in combination with nirogacestat

Secondary Endpoints

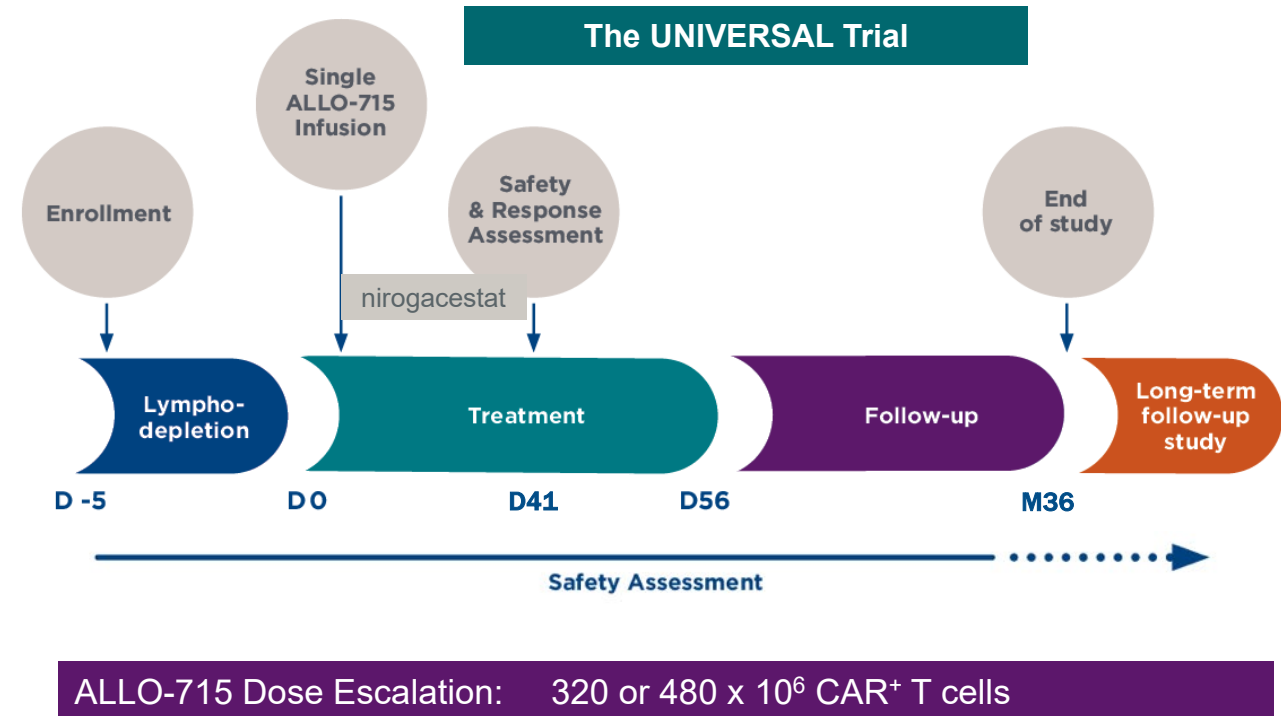
- Anti-tumor activity and cellular kinetics of ALLO-715 in combination with nirogacestat
- ALLO-647 and nirogacestat pharmacokinetics
- Evaluate the expression of BCMA in bone marrow plasma cells with and without nirogacestat

Key Eligibility Criteria

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

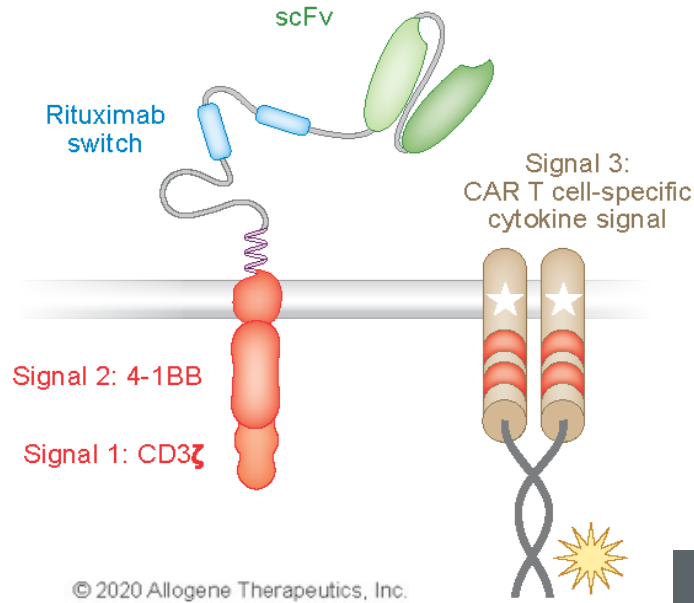
IMiD: immunomodulatory imide drug

PI: proteasome inhibitors



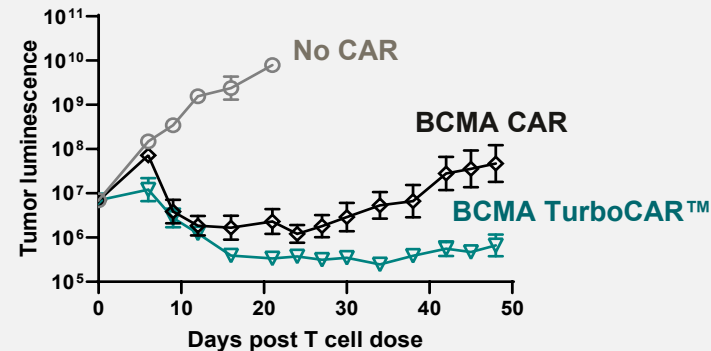
ALLO-605: First TurboCAR™ Investigational Candidate

ALLO-605 IND Planned in 1H 2021 for the IGNITE Trial

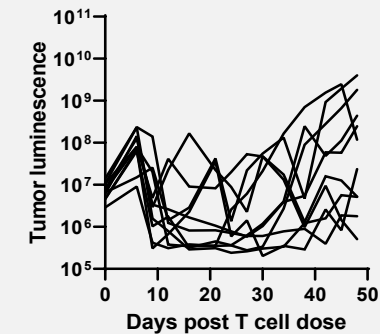


- **TurboCAR™ is designed to recapitulate cytokine signaling selectively in CAR T cells**
 - Does not stimulate host immune cells which could cause systemic toxicity or reject CAR
 - Delivers survival benefit selectively to CAR T cells
- **Opportunities for development include:**
 - Improving the efficacy of CAR T cells
 - Reducing CAR T cell dose requirement
 - Overcoming exhaustion to enable CAR T therapies for solid tumors
- **Improved Engraftment and Persistence, and Delayed Exhaustion seen in preclinical studies**

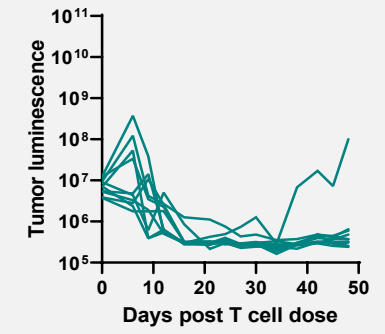
Enhanced Activity and Durability of Response



BCMA CAR



BCMA TurboCAR™



Translating CAR T Success in Hematologic Cancers to Solid Tumors

2020 American Cancer Society Statistics

	Heme Malignancies	Solid Tumors
Incidence	179,000	1,600,000
Deaths	57,000	504,000

Worldwide Market for Oncology Drugs in 2018*

- All drug spend = \$1.2 trillion
- Total cancer drug spend ≈ \$150 billion
- Hematologic cancer drugs ≈ \$31.3 billion

*IQVIA

Significant opportunity to expand benefits of CAR T therapy into largest area of unmet need

Target Selection/Validation

- CAR optimization
- Multi-targeting CARs

T Cell Fitness

- CAR signaling/ TurboCARs™
- Manufacturing improvements



Tumor Trafficking

- Combinations
- CAR T engineering

Immunosuppressive TME

- Next generation TurboCARs™
- Enhanced/flexible lymphodepletion
- CAR T cell doses, frequencies and administration of cells



ALLO-316: Investigating an AlloCAR T™ in Renal Cell Carcinoma

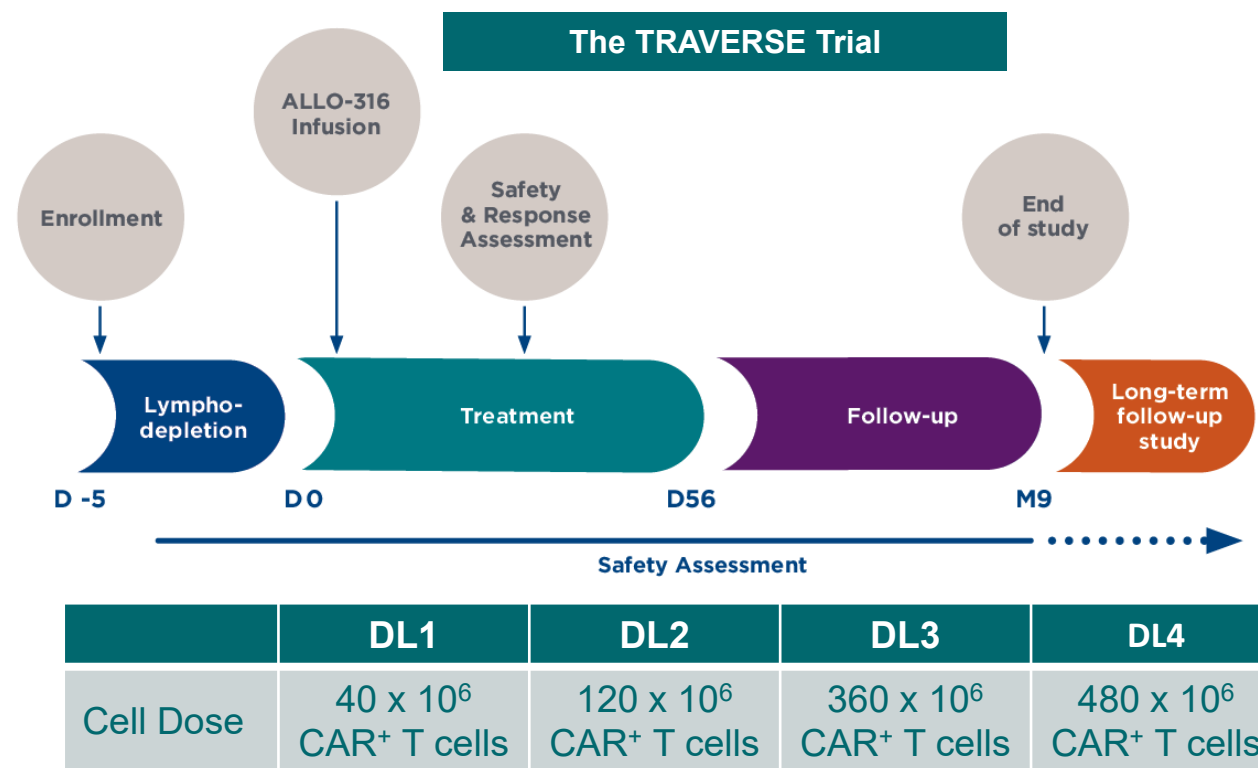
First of Several Solid Tumor Candidates Planned for Clinical Development

CD70 target selectively expressed in several cancers¹:

- RCC (80-100% of tumors)
 - High prevalence with limited ‘off tumor’ expression
- AML (96% of tumors)

IND cleared for anti-CD70 candidate ALLO-316:

- ALLO-316 is associated with minimal or no fratricide
- Phase I TRAVERSE trial in RCC to begin in 1H 2021
 - Primary endpoints: Safety and tolerability
 - Secondary endpoints: Anti-tumor efficacy, PK/PD
- Potential second indication in AML targeted for 2021/2022



¹ Expert Opin Ther Targets. 2008 Mar; 12(3): 341–351. doi: 10.1517/14728222.12.3.341

Partnerships: Accelerating Development and Positioning for the Future



Global development partner for
CD19 with ex-US
commercialization rights



Established Allogene Overland
Biopharm joint venture to
develop and commercialize
AlloCAR T™ cell therapies in
greater China



TALEN gene editing



Induced pluripotent stem cells (iPSC)



Enhanced manufacturing efficiency



Preclinical and clinical investigation
of AlloCAR T candidates across
Allogene's broad portfolio of
hematologic and solid tumors



Clinical collaboration to evaluate
ALLO-715 in combination with
Nirogacestat

GLOBAL EXPANSION

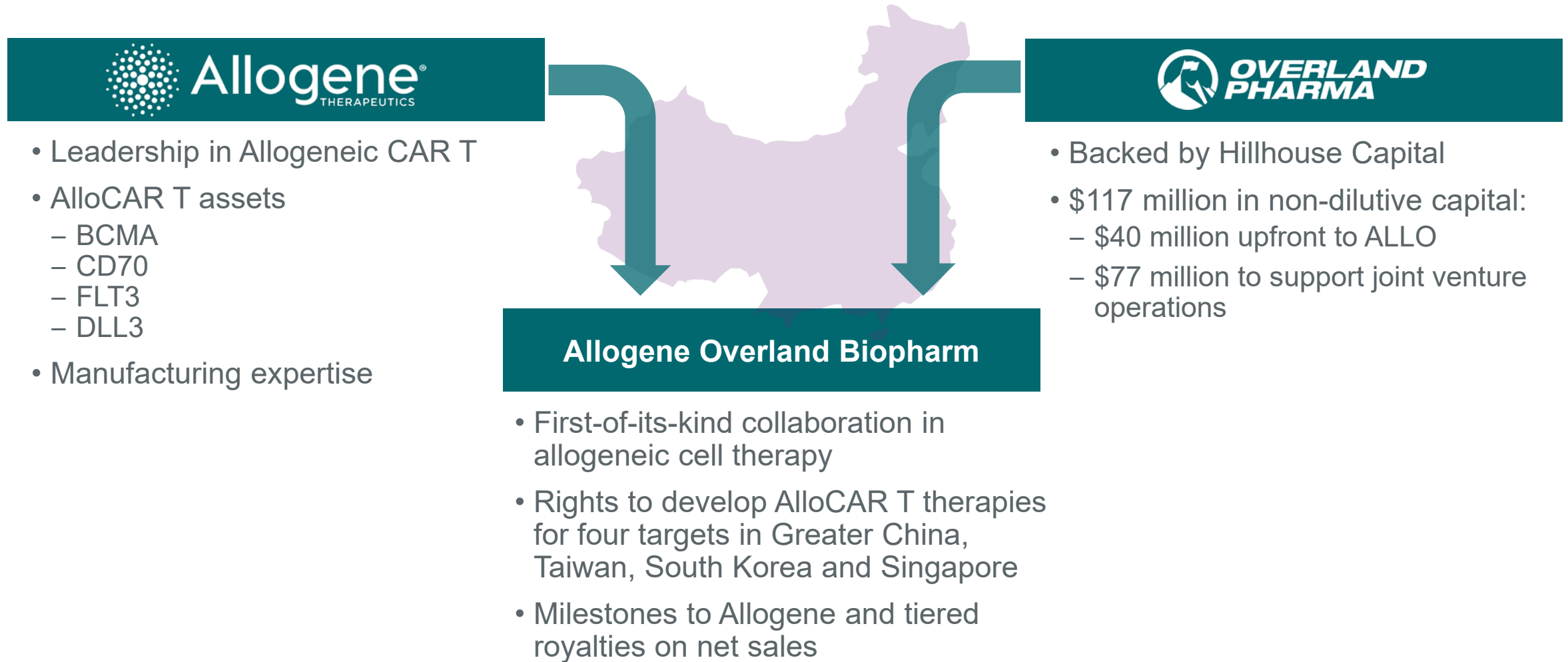
TECHNOLOGIES

RESEARCH

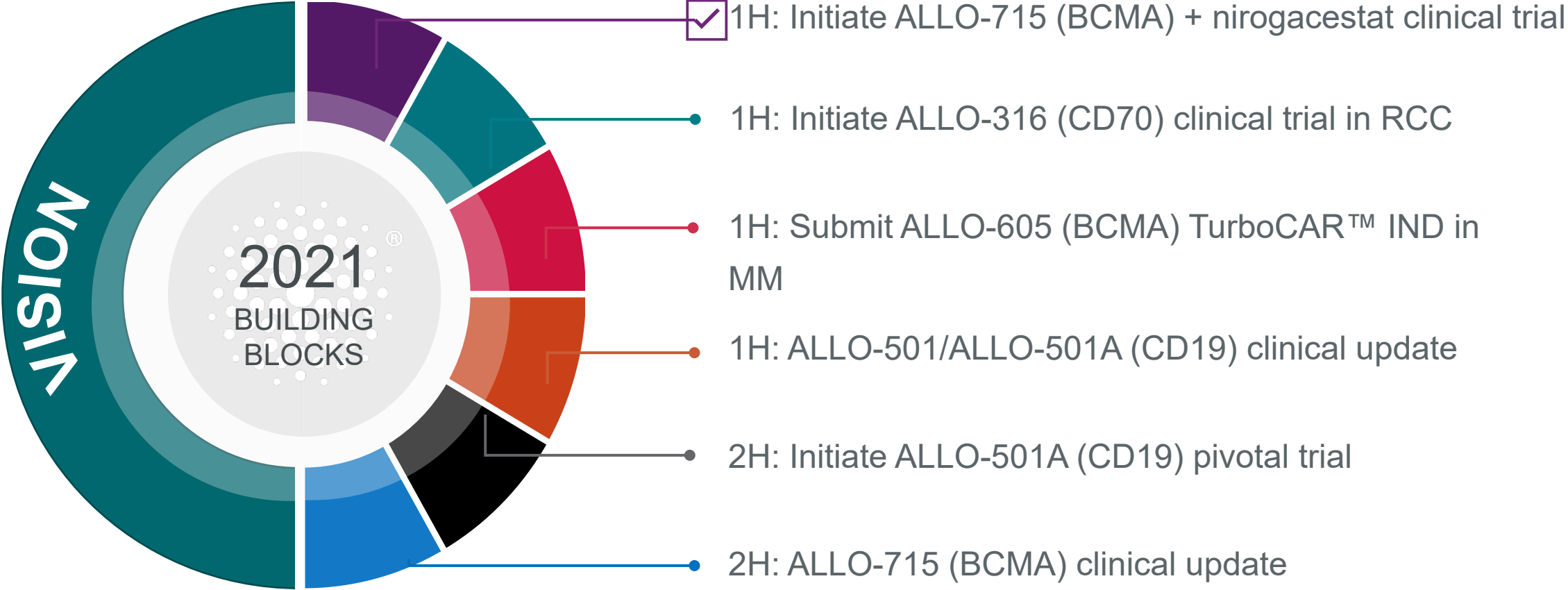


Allogene Overland Joint Venture: Expanding into Greater China

Opportunity to Accelerate Global Development of AlloCAR T Therapies



2021 Building Blocks to the Allogene Vision



*Create and lead the next revolution in cancer treatment
by delivering to patients the first AlloCAR T™ therapies for blood cancers and solid tumors.*



The Next Revolution in Cell Therapy

Leading Today, Creating Tomorrow

Allogene therapies utilize TALEN® gene-editing technology pioneered and owned by Collectis. ALLO-501 and ALLO-501A are anti-CD19 AlloCAR T™ therapies being jointly developed under a collaboration agreement between Servier and Allogene based on an exclusive license granted by Collectis to Servier. Servier grants to Allogene exclusive rights to ALLO-501 and ALLO-501A in the U.S. while Servier retains exclusive rights for all other countries. Allogene has an exclusive license to the Collectis technology for allogeneic products directed at BCMA, FLT3, DLL3 and CD70.

ALLO-501 ALPHA Study (NCT03939026) Design and Endpoints

Phase 1, Open-label, Multicenter Dose Escalation Study

Primary Endpoints

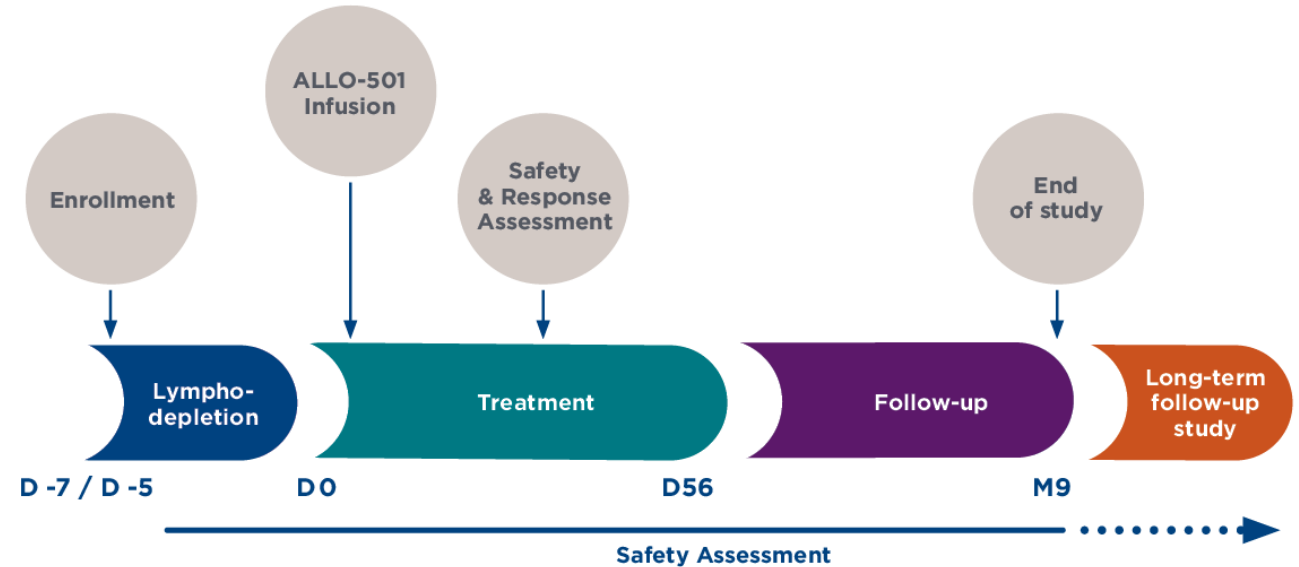
- Safety and dose-limiting toxicity of ALLO-647/Flu/Cy followed by ALLO-501

Key Secondary Endpoints

- Overall response rate
- ALLO-501 cell kinetics
- ALLO-647 PK

Key Eligibility Criteria

- R/R LBCL or FL
- At least 2 prior lines of therapy, including an anti-CD20 monoclonal antibody
- ECOG 0 or 1
- Prior autologous CAR T allowed if tumor remains CD19+
- Patients with Donor Specific Antibodies and rituximab > 15ng/ml were excluded



	DL1	DL2	DL3
Cell Dose	40 x 10 ⁶ CAR ⁺ T cells	120 x 10 ⁶ CAR ⁺ T cells	360 x 10 ⁶ CAR ⁺ T cells

- Lymphodepletion Regimens
 - LD1: Flu/Cy and ALLO-647 13 mg/d x 3 days
 - LD2/LD3: Flu/Cy and ALLO-647 30 mg/d x 3 days (concomitant/staggered)

Fludarabine (Flu): 30 mg/m²/d x 3 days **Cyclophosphamide (Cy):** 300 mg/m²/d x 3 days



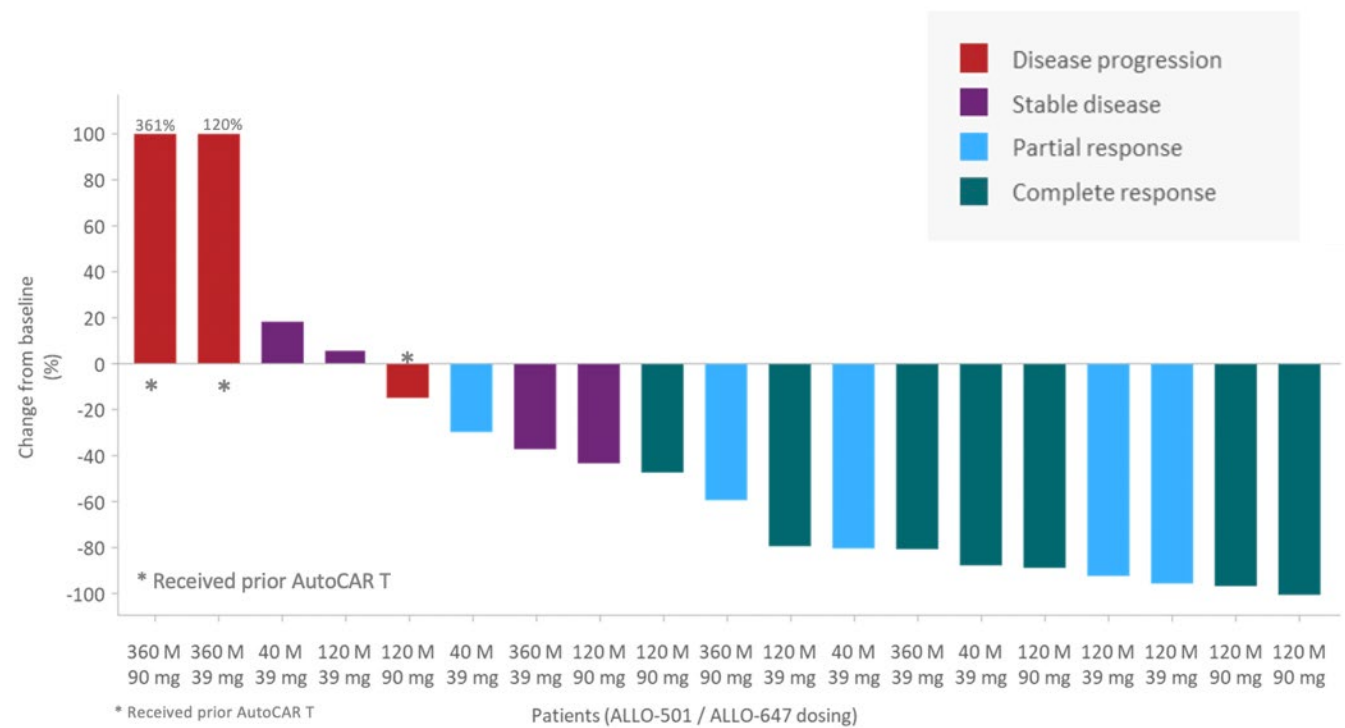
Phase 1 ALPHA Best Overall Response

Cell Dose and LD regimen	39mg ALLO-647			ALL 39mg ALLO-647 (N = 11)	90mg ALLO-647		All 90mg ALLO-647 (N=8)	All Patients (N=19) Rate (95%CI)
	40 x 10 ⁶ CAR ⁺ cells (N=4)	120 x 10 ⁶ CAR ⁺ cells (N=4)	360 x 10 ⁶ CAR ⁺ cells (N=3)		120 x 10 ⁶ CAR ⁺ cells (N=6)	360 x 10 ⁶ CAR ⁺ cells (N=2)		
ORR, n (%)	3 (75%)	3 (75%)	1 (33%)	7 (64%)	4 (67%)	1 (50%)	5 (63%)	12/19 (63%) (38%, 84%)
CR , n (%)	1 (25%)	1 (25%)	1 (33%)	3 (27%)	4 (67%)	0 (0%)	4 (50%)	7/19 (37%) (16%, 62%)

Median follow-up time: 3.8 months (range: 0.7 - 6.1)



ALLO-501 Demonstrated Meaningful Tumor Reductions



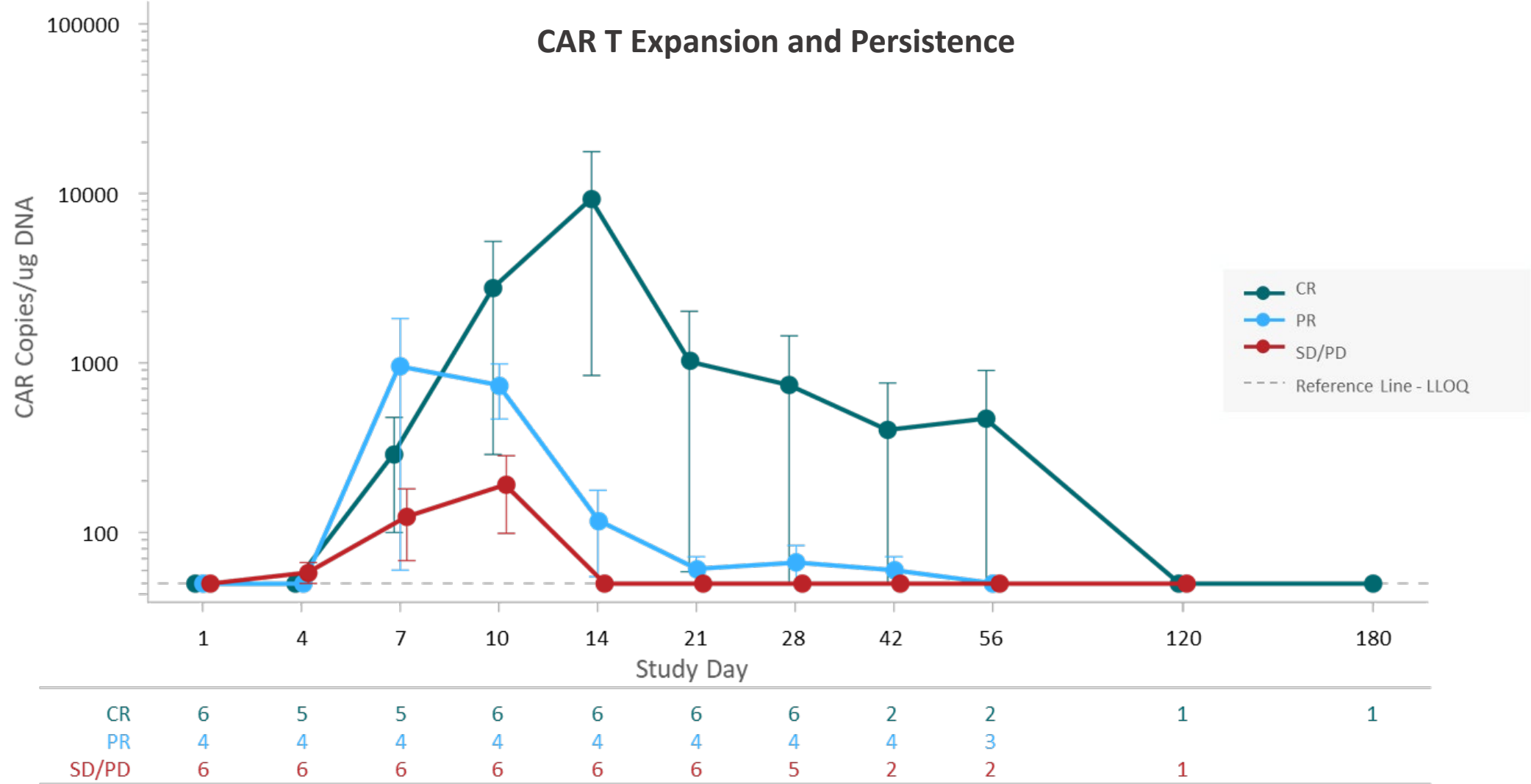
ASCO May 2020

4 Month Ongoing CR

ALLO-501 Patient Case Study

Baseline	4 Month CR

AlloCAR T Cell Expansion Is Associated with Clinical Response



ASCO 2020



ALPHA Trial: De-Risking the CD19 Program

- ✓ Can ALLO-501 be successfully manufactured?
- ✓ Can ALLO-501 be safely administered without causing clinically relevant Graft vs. Host Disease?
- ✓ Can ALLO-647 be safely administered and allow a sufficient window of lymphodepletion to allow ALLO-501 expansion and persistence?
- ✓ Can ALLO-501 provide complete responses across multiple histologies?

ONGOING Can ALLO-501 provide durable responses?



Heavily Pretreated Patients with Advanced, Refractory Stage Disease

Median Time from Enrollment to Treatment:

5 Days

Enrolled (N=35)

4 patients ineligible due to rapidly progressing disease

Safety Population (N=31)

5 treated patients yet to reach assessment

Efficacy Population (N=26)

CAR ⁺ T Cell Dose	Lymphodepletion Regimen		
	FCA		CA
	Low Dose ALLO-647	High Dose ALLO-647	Low Dose ALLO-647
40 x 10 ⁶ Cells	3	–	–
160 x 10 ⁶ Cells	4	–	3
320 x 10 ⁶ Cells	6	4	3
480 x 10 ⁶ Cells	3	–	–

Overall median follow-up time = **3.2 Months**

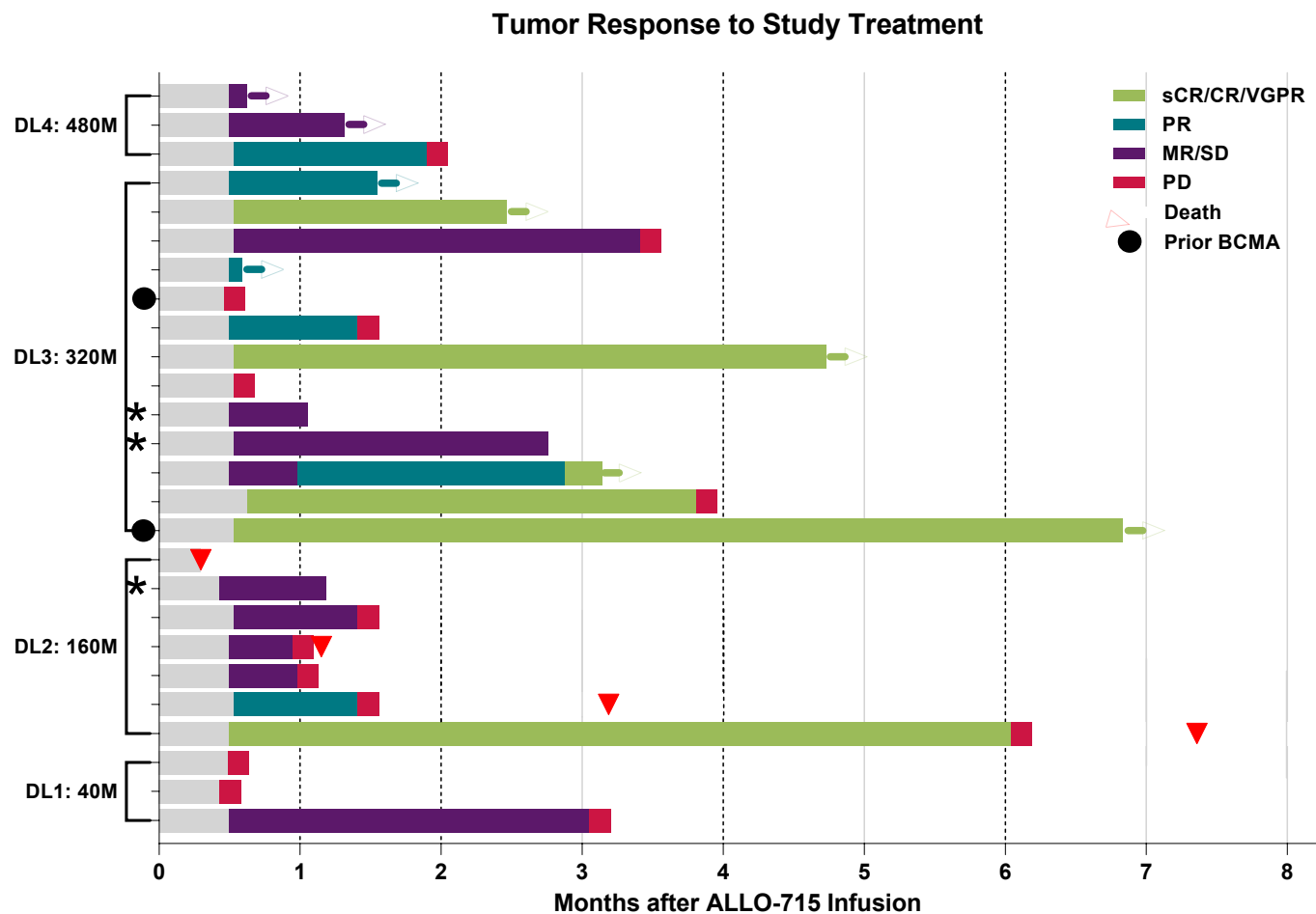
All Patients Refractory to Last Line of Therapy

Characteristics		Safety Population (N = 31)
Age, median (range), years		65 (46, 76)
Gender, %	Male	61
	Female	39
ECOG, %	0	48
	1	52
ISS Stage ≥2, %		74
High-risk cytogenetics*, %		48
Extramedullary disease, %		23
High tumor burden†, %		39
Time since initial diagnosis, median (range), years		5.4 (0.9, 20.1)
Number of prior anti-myeloma regimens, median (range)		5 (3 – 11)
Prior autologous SCT, %		94
Penta-exposed, %		94

ASH 2020



Objective Responses are Cell Dose-Dependent

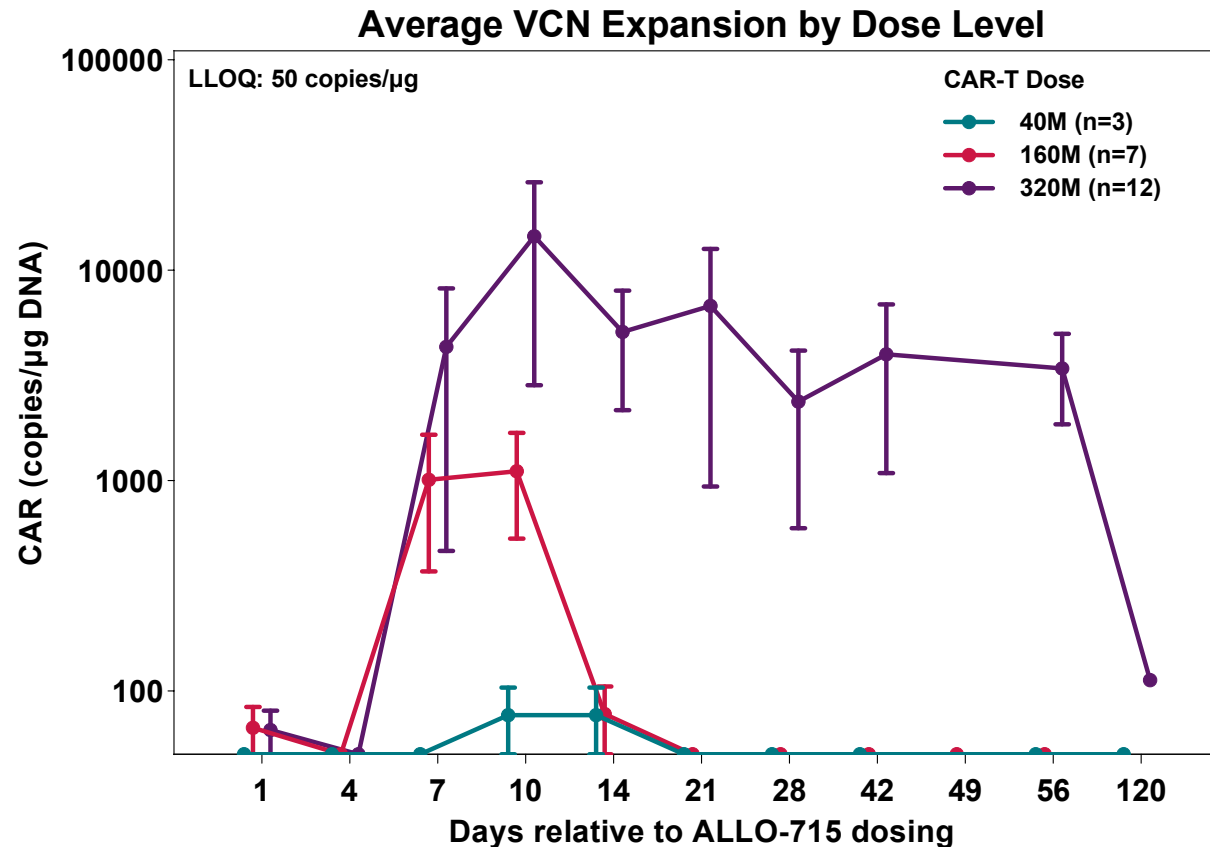


- Median time to response was 16 days
- Increasing response rates as cell dose increases
- 6 out of 9 patients treated with DL3 or DL4 with response remain in response

*Discontinued follow-up on study prior to disease progression.

ASH 2020

AlloCAR T Cell Expansion Increased with ALLO-715 Dose Level



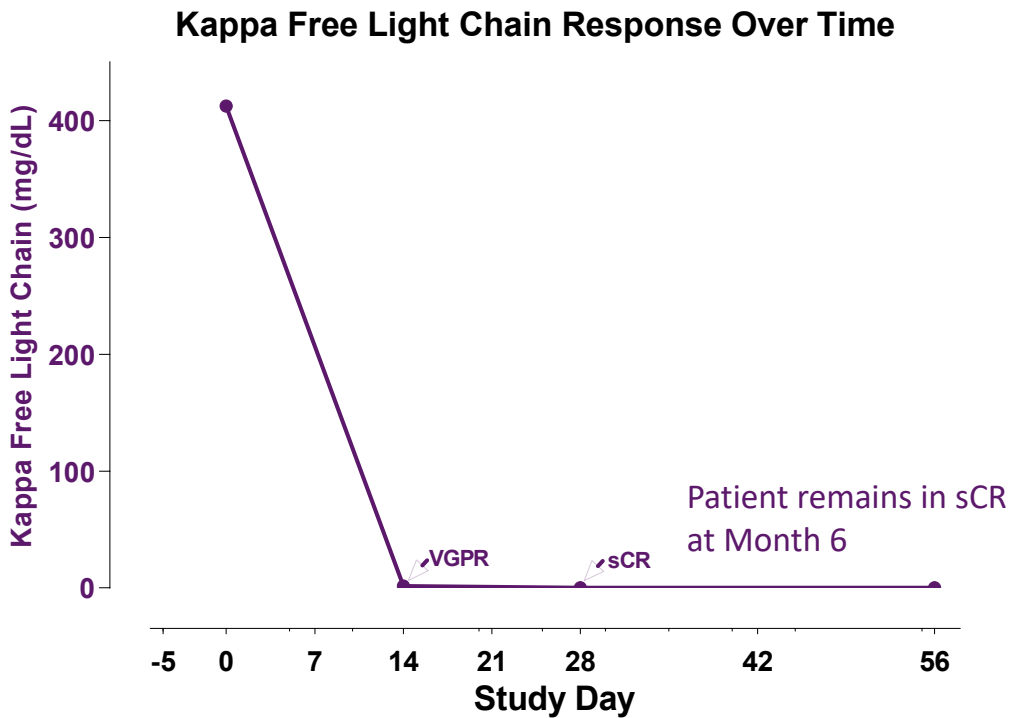
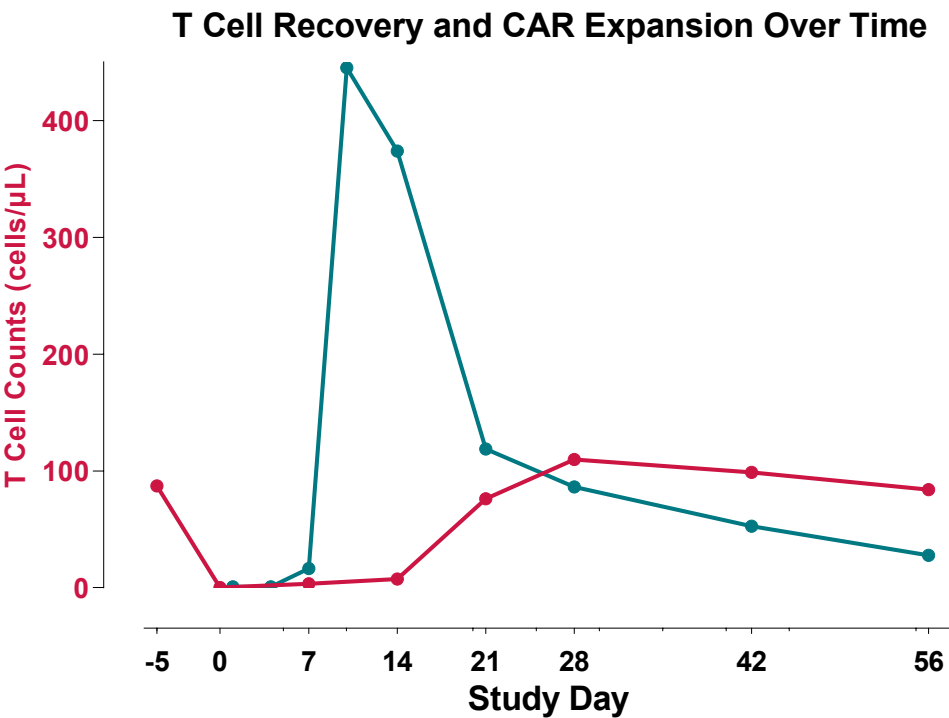
- Cell expansion was observed as early as 7 days
- Improved expansion in patients who received higher cell doses
- Persistence observed out to month 4 in dose level 3
- Patients with CAR T expansion had higher serum levels of IL15 at day 0 and day 14 *[data not shown]*

As of data cutoff date, limited DL4 vector copy number (VCN) data was available (2 patients with neither patient reaching day 28). Remaining data pending.

ASH 2020

ALLO-715 Case Study:

Kinetics of AlloCAR T Cell Persistence, Lymphocyte Count and Response



ASH 2020

UNIVERSAL: De-Risking the Anti-BCMA AlloCAR T Franchise in MM

- ✓ Can ALLO-715 be successfully manufactured?
- ✓ Can ALLO-715 be safely administered without causing clinically relevant Graft vs. Host Disease?
- ✓ Can ALLO-647 be safely administered and allow a sufficient window of lymphodepletion to allow ALLO-715 expansion and persistence?
- ✓ Can an allogeneic CAR T therapy demonstrate a meaningful response in a heavily treated/refractory patient with multiple myeloma?

ONGOING Can we further enhance the efficacy and durability of allogeneic cell therapy in multiple myeloma?

