Mid-Year 2022
Allogeneic CAR T Pipeline Update

June 8, 2022

Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this presentation that do not relate to matters of historical fact should be considered forward-looking statements, including, without limitation, statements regarding the clinical development and expected efficacy and benefit of our product candidates, the expected timing of updates regarding our allogenic CAR T and in vivo programs, the expected timing of regulatory processes, expectations about our operational initiatives and business strategy, and expectations about achievement of key milestones. In some cases, you can identify forward-looking statements by terms such as “aim,” “anticipate,” “approach,” “believe,” “contemplate,” “could,” “estimate,” “expect,” “goal,” “intend,” “look,” “may,” “mission,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “will,” “would,” or the negative thereof and similar words and expressions.

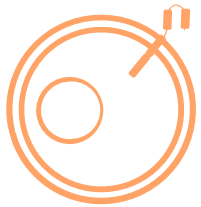
Forward-looking statements are based on management’s current expectations, beliefs and assumptions and on information currently available to us. Such statements are subject to a number of known and unknown risks, uncertainties and assumptions, and actual results may differ materially from those expressed or implied in the forward-looking statements due to various important factors, including, but not limited to: our ability to become profitable; our ability to procure sufficient funding and requirements under our current debt instruments and effects of restrictions thereunder; risks associated with raising additional capital; our operating expenses and our ability to predict what those expenses will be; our limited operating history; the success of our programs and product candidates in which we expend our resources; our limited ability or inability to assess the safety and efficacy of our product candidates; our dependence on our ARCUS technology; the initiation, cost, timing, progress, achievement of milestones and results of research and development activities, preclinical studies and clinical trials; public perception about genome editing technology and its applications; competition in the genome editing, biopharmaceutical, and biotechnology fields; our or our collaborators’ ability to identify, develop and commercialize product candidates; pending and potential liability lawsuits and penalties against us or our collaborators related to our technology and our product candidates; the U.S. and foreign regulatory landscape applicable to our and our collaborators’ development of product candidates; our or our collaborators’ ability to obtain and maintain regulatory approval of our product candidates, and any related restrictions, limitations and/or warnings in the label of an approved product candidate; our or our collaborators’ ability to advance product candidates into, and successfully design, implement and complete, clinical or field trials; potential manufacturing problems associated with the development or commercialization of any of our product candidates; our ability to obtain an adequate supply of T cells from qualified donors; our ability to achieve our anticipated operating efficiencies at our manufacturing facility; delays or difficulties in our and our collaborators’ ability to enroll patients; changes in interim “top-line” and initial data that we announce or publish; if our product candidates do not work as intended or cause undesirable side effects; risks associated with applicable healthcare, data protection, privacy and security regulations and our compliance therewith; the rate and degree of market acceptance of any of our product candidates; the success of our existing collaboration agreements, and our ability to enter into new collaboration arrangements; our current and future relationships with and reliance on third parties including suppliers and manufacturers; our ability to obtain and maintain intellectual property protection for our technology and any of our product candidates; potential litigation relating to infringement or misappropriation of intellectual property rights; our ability to effectively manage the growth of our operations; our ability to attract, retain, and motivate key executives and personnel; market and economic conditions; effects of system failures and security breaches; effects of natural and manmade disasters, public health emergencies and other natural catastrophic events; effects of COVID-19 pandemic and variants thereof, or any pandemic, epidemic or outbreak of an infectious disease; insurance expenses and exposure to uninsured liabilities; effects of tax rules; risks related to ownership of our common stock and other important factors discussed under the caption “Risk Factors” in our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022 , as any such factors may be updated from time to time in our other filings with the SEC, which are accessible on the SEC’s website at www.sec.gov and the Investors page of our website under SEC Filings at investor.precisionbiosciences.com.

All forward-looking statements speak only as of the date of this presentation and, except as required by applicable law, we have no obligation to update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

Precision Biosciences is Delivering on the **Promise of Therapeutic Genome Editing to Change the Future of Medicine**

ARCUS® Genome Editing

Derived from natural homing endonuclease for ex vivo and in vivo applications



***Ex Vivo* single-gene edit for Allogeneic CAR T immunotherapy**

Single-dose, donor-derived, off-the-shelf CAR T cells

***In Vivo* Editing for Genetic Diseases**

On target, *potentially curative, one-time treatments*

PRECISION BIOSCIENCES

Ex Vivo CAR T Pipeline Development Focused on Potential First-in-Class and Best-in-Class Approaches in Distinct Patient Populations

Potential First-in-Class

PBCAR0191
in CAR T
Relapsed DLBCL

PBCAR0191 Goal:
- *Provide urgent solution to CAR T relapsed patients with dire need*
- *First approved Allo CAR T therapy*
- *First approved gene-edited therapy*

Potential Best-in-Class

PBCAR19B "Stealth Cell"
2nd/3rd Line NHL

PBCAR269A Combo
in R/R Multiple Myeloma

Best-in-Class Program Goals:
- *Displace autologous CAR T in earlier line patients for CD19/NHL and BCMA/R/R MM*

Ex Vivo CAR T Pipeline Development Focused on Potential First-in-Class and Best-in-Class Approaches in Distinct Patient Populations

Data presentation for today

Potential First-in-Class

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PRECISION BIOSCIENCES

Executive Summary

PBCAR0191 potential first in class allogeneic therapy for CAR T relapsed patients (median 5+ prior lines) with highest unmet need

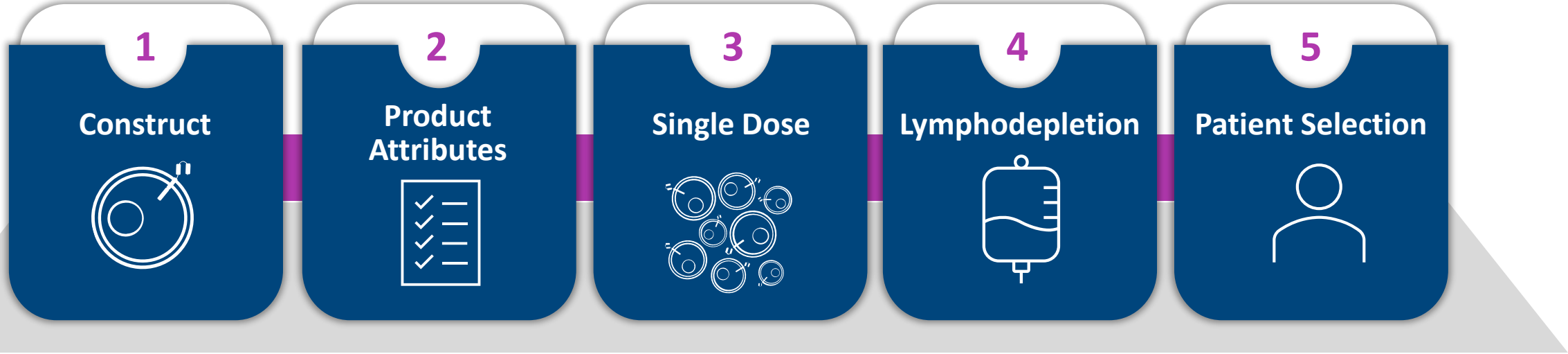
- **Efficacy[1]:**
  - **100% Response Rate, 73% Complete Response** in first 11 evaluable CAR T relapsed subjects
  - **50% ≥ 6-month Duration-of-Response** in evaluable subjects
  - Results to date exceed current standard-of-care in the CAR T relapsed patient population
- **Safety:**
  - **In "New Cohort" (DL4b) hematologic recovery and overall safety improved** with lower dose intensity lymphodepletion (LD) without sacrificing efficacy
  - Reduced Grade ≥ 3 infections from 67% to 17% with modified/lesser LD
  - No Grade 3 CRS; 1 Grade 3 ICANS, which resolved in 24 hours
  - Decrease LD to standard lymphodepletion to optimize therapeutic index
- **Pharmacokinetics:**
  - **First Allogeneic CAR T to reach peak expansion level of Auto CAR T** in long-term responders due to improved product attributes/manufacturing and higher CAR T dose (DL4b), with decreasing lymphodepletion
- **Regulatory Path:**
  - Plan to **request FDA meeting in 2022** to discuss data and path forward for PBCAR0191

1. Interim efficacy and safety results as of May 31, 2022

Precision is Pursuing a Deliberate, Multi-Faceted Approach to Allogeneic CAR T Treatments for Patients

Our **approach** for Allo CAR T is to overcome host immune rejection while accomplishing an acceptable safety profile

5 levers to overcome host immune rejection



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PBCAR0191: Refining Optimal Therapeutic Index For Patients

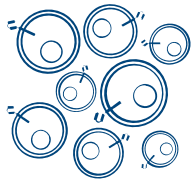
1 Construct

Single-gene edit with novel N6 co-stimulatory domain

2 Product Attributes

- Improved manufacturing to drive efficacy, safety and reproducibility of cell dose

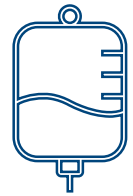
3 Single Dose



- **DL1** = 3×10^5 cells/kg
- **DL2** = 1×10^6 cells/kg
- **DL3** = 3×10^6 cells/kg
- **DL4b** = 500×10^6 cells (flat dose)

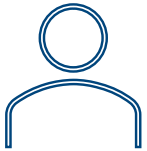
New cohort since ASH'21

4 Lymphodepletion



- **eLD** = 30 mg/m^2 Flu × 4 days + 1000 mg/m^2 Cy × 3 days
- **mLD** = 30 mg/m^2 Flu × 4 days + 750 mg/m^2 Cy × 3 days
- **sLD** = 30 mg/m^2 Flu × 3 days + 500 mg/m^2 Cy × 3 days

5 Patient Selection



- R/R NHL
- R/R ALL
- CD19 CAR T Relapsed

***Best outcomes for PBCAR0191 have been achieved in CAR T relapsed patients**

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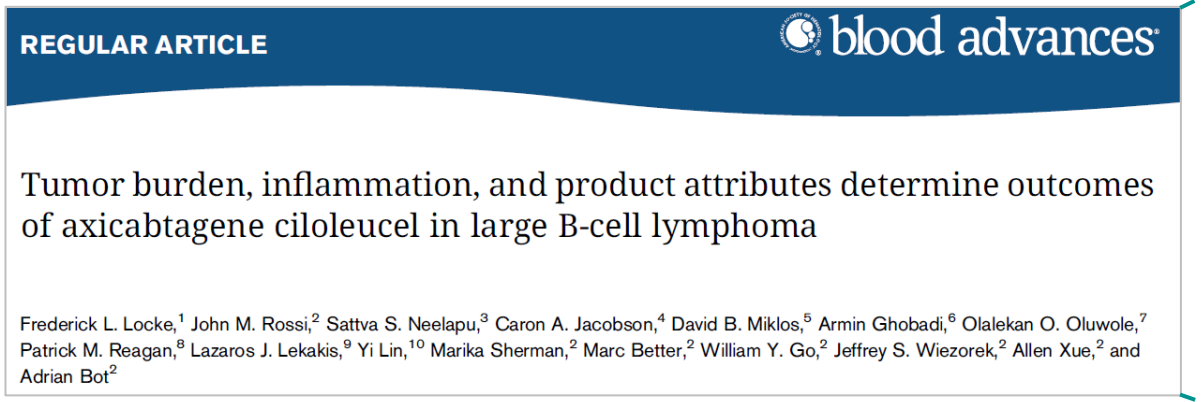
Peak Expansion is the Strongest Determinant of Durable CAR T Response

Product Attributes



REGULAR ARTICLE

blood advances

Tumor burden, inflammation, and product attributes determine outcomes of axicabtagene ciloleucel in large B-cell lymphoma

Frederick L. Locke,[1] John M. Rossi,[2] Sattva S. Neelapu,[3] Caron A. Jacobson,[4] David B. Miklos,[5] Armin Ghobadi,[6] Olalekan O. Oluwole,[7] Patrick M. Reagan,[8] Lazaros J. Lekakis,[9] Yi Lin,[10] Marika Sherman,[2] Marc Better,[2] William Y. Go,[2] Jeffrey S. Wiezorek,[2] Allen Xue,[2] and Adrian Bot[2]

"In this study, the strongest correlate of durable response was peak CAR T-cell levels in blood normalized to pre-treatment tumor burden."

*"**The number of CAR T-cells in peripheral blood early** (within 2 weeks) after infusion were **associated with clinical efficacy.** However, **CAR levels at later points were not significantly associated with durable efficacy …**"*

Chappell, K, et al. (2020). Long-Term Follow-Up of Anti-CD19 Chimeric Antigen Receptor T-Cell Therapy. *Hematologic Malignancy*, 38(32), 3805-3815.
Locke, F, et al. (2020). Tumor Burden, Inflammation, and Product Attributes Determine Outcomes of Axicabtagene Ciloleucel in Large B-cell Lymphoma. *Blood Advances*, 4(19):4898-4911.

Optimized Manufacturing Product Attributes Impact CAR T Efficacy & Safety

Product Attributes

TOOLS: ARCUS Single-Gene Edit

- Puts less stress on cells vs multiplex edit
- Designed to reduce risk of translocations logs less than multiplex edit

EXPERTISE: PBCAR0191 Optimized Process

- Improved product attributes for optimal therapeutic index
- Improved peak expansion
- Improved yield

> We found that **optimizing the product composition towards the juvenile T-cell phenotype** to find a CCR7+, CD45RA+, CD27+, and CD28+ [product] may improve the axi-cel therapeutic index.
>
> Jason Westin, MD
> *MD Anderson Cancer Center in Houston*

1. **Juvenile phenotype associated with all efficacy metrics, including durability of response**.
2. **Differentiated T cells were negatively associated with efficacy** … linked to higher peak levels of proinflammatory molecules **and high levels of grade 3 or greater neurologic events**.[1]

***Precision is applying manufacturing optimization across entire Allo CD19 CAR T platform**

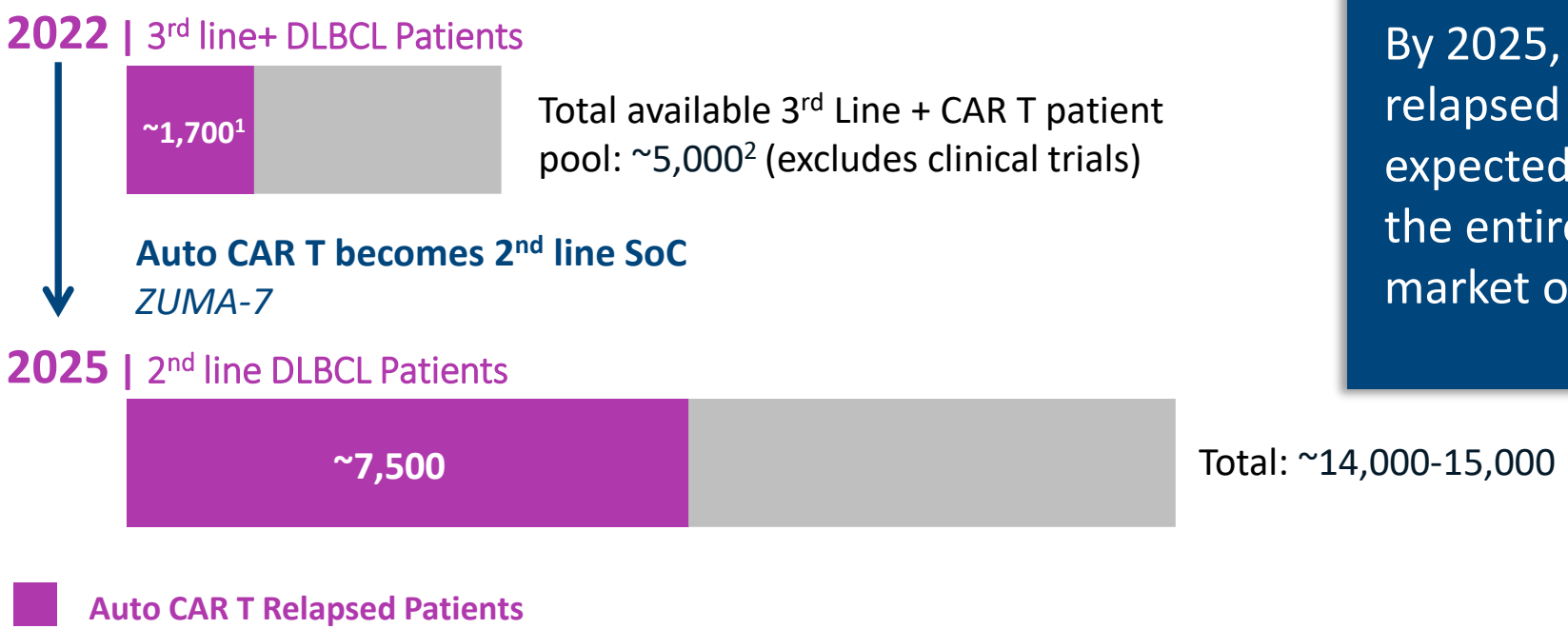
PRECISION BIOSCIENCES

1. Targeted Oncology, April 2022; "T-Cell Attributes of Axi-cel Correlate With Outcomes in Large B-Cell Lymphoma"

CAR T Relapsed Market Expected to Grow ~4-5x by 2025 Driven by Auto CAR T Becoming 2nd line DLBCL Standard-of-Care (SoC)

Patient Selection

CAR T Relapsed Eligible Patients in US



By 2025, the Auto CAR T relapsed patient population is expected to be 1.5X larger than the entire 3rd line+ Auto CAR T market opportunity today

1. LEK Research (HCP interviews, Evaluate Pharma, DRG), Internal assumptions
2. https://doi.org/10.6004/jnccn.2020.7742, CancerMPact, ZUMA-1 and ZUMA-7 Clinical Studies

Note: ZUMA-1 and ZUMA-7 relapse rate estimated off 2-year EFS. Assumes higher drug treatment rate of 90% in 2025 from the advancement of ZUMA-7 into 2L setting offering potential curative outcomes/new SoC

Current Treatment Options Offer Poor Outcomes for CAR T Relapsed Patients with Progression Free Survival (PFS) only 1-2 Months

Patient Selection

Real world data for patients following treatment with Yescarta (Auto CAR T)[1]

Therapy	ORR	CR	PR	PFS (mos.)	OS (mos.)
Overall (n = 136)	**29%**	**17%**	**NA/NR**	**1.8**	**5.9**
Checkpoint inhibitor based (n = 28)	46%	18%	26%	2.9	11
Chemotherapy (n = 17)	18%	12%	6%	1.7	3.5
Lenalidomide based (n=27)	19%	19%	NA/NR	1.6	4.6
Radiation (n = 10)	30%	20%	10%	1.9	7.3
Other treatments (n = 18)	-	-	-	-	-
Palliative care (n = 36)	-	-	-	-	-

*Across real-world data sources, greater than 25% of patients receive ONLY palliative care, median overall survival (OS) approximately 4-6 months for CAR T relapsed patients[1,2]

NA/NR = not available

1. US CAR T Consortium Study - https://pubmed.ncbi.nlm.nih.gov/33156925/

Note: Other therapies included targeted treatments such as venetoclax, brentuximab vedotin or ibrutinib, novel therapies, steroids, second CAR-T on clinical trial, and allogeneic stem cell transplant. In total, 8 patients proceeded to allogeneic stem cell transplant after axi-cel PD, 3 of whom remain in CR. ;

2. University of Washington study shows CAR T early relapsers only have mOS of 3.8 months; https://onlinelibrary.wiley.com/doi/10.1002/ajh.25505

PRECISION BIOSCIENCES

Minimal Acceptable Target Product Profile for CAR T Relapsed Patient Population

Patient Selection

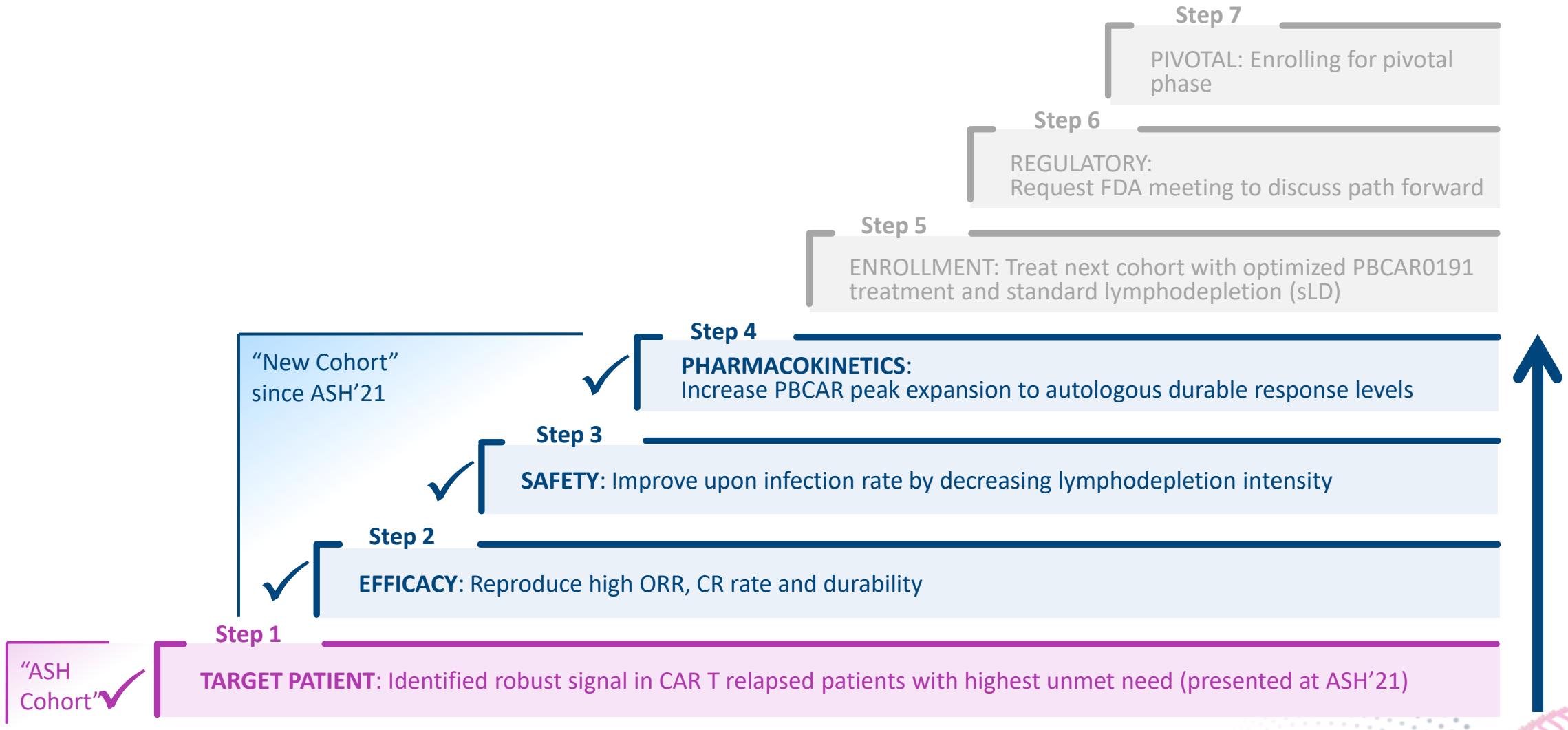
	CAR T Relapse Median 5+ prior lines	3rd line NHL
Progression Free Survival (mPFS)	**> 3 months**	> 6-7 months
Duration of Response (DoR)	**> 50% @ 3 months**	~35% CR at 6 months; ~32% CR at 1 year plus
Overall Response Rate (ORR)	**> 50%**	> 70% at 28 days
Overall Survival (mOS)	**> 6 months** [1,2]	26 months[3]
Safety	**Highest risk salvage population**	Same or better than Auto CAR T
Potential Regulatory Path	**Single-arm study with historical control** *(to be discussed with FDA)*	Head-to-head vs. Auto CAR T/ Auto transplant

1. https://ashpublications.org/blood/article/137/13/1832/474111/Outcomes-of-patients-with-large-B-cell-lymphoma
2. https://onlinelibrary.wiley.com/doi/10.1002/ajh.25505 (University of Washington N=61 patients)
3. Long term overall survival in ZUMA-1 https://ash.confex.com/ash/2021/webprogram/Paper148078.html

PRECISION BIOSCIENCES

Potential First-in-Class:
Allogeneic PBCAR0191 for CAR T Relapsed Patients

PBCAR0191 Path to Best Therapeutic Index for CAR T Relapsed Patients



PRECISION BIOSCIENCES

CAR T Relapsed Subjects Enrolled Had Aggressive Disease and Poor Prognosis

Patient Selection

	ASH Cohort DL3[1,3,4] (n=6[3])	New Cohort DL4b[2] (n=6)
Age (y), median (range)	50.5 (38-67)	72.5 (45-77)
Primary Refractory	2 (33%)	2 (33%)
Aggressive histology, n (%)	5 (100%)	5 (83%)
DLBCL	5 (100%)	4 (67%)
FL transformed to DLBCL	0	1 (17%)
Number of prior treatments, median (range)	7.5 (4-11)	4 (3-7)
Number of prior treatments across all CAR T relapsed patients, median	5 lines	
Prior CD19 directed CAR T, n (%)	6 (100%)	6 (100%)
Prior HSCT n (%)	4 (67%)	1 (17%)

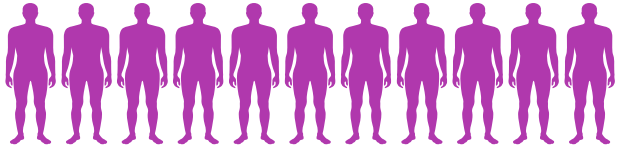
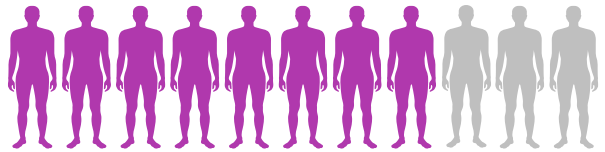
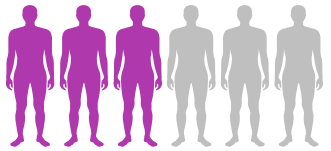
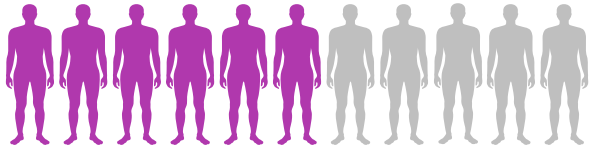
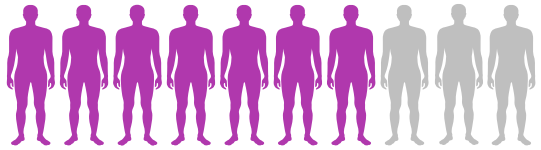
1. Enhanced LD (eLD) = Fludarabine 30 mg/m^2/day × 4 days + Cyclophosphamide 1000 mg/m^2/day × 3 days
2. Modified LD (mLD) = Fludarabine 30 mg/m^2/day × 4 days + Cyclophosphamide 750 mg/m^2/day × 3 days
3. Included one B-ALL subject in MRD negative CR at >9 months after relapse from 2 prior allogeneic HCTs and CD19 auto-CAR T
4. Reported in 2021 at ASH

PRECISION BIOSCIENCES

Since ASH'21: Efficacy Results in CAR T Relapsed Population

100% Overall Response Rate (ORR), 73% CR with 50% Durable Responses at > 6 Months

CAR T Relapsed
Median 5+ prior lines
(n = 11 evaluable)[1, 2]

ORR ≥ Day 28 n (%)		**11 (100%)**
CR ≥ Day 28 n (%)		**8 (73%)**
> 6 mo. DoR n (%)[3]		**3 (50%)** *of evaluable*
Ongoing responders n (%)[4]		**6 (55%)**
PFS > 2 months n (%)		**7 (70%)**

Potential Regulatory Hurdle

ClinicalTrials.gov identifier: NCT03666000

1. Interim data as of May 31, 2022.
2. One subject non-evaluable for efficacy at Day 28 assessment due to death from suspected fludarabine associated neurotoxicity at Day 23; Subject had complete resolution on PET/CT at Day 21
3. Durable responses in 3/6 subjects evaluable at 6 month
4. 4 of 6 (67%) evaluable subjects have achieved remission inversions when compared to prior therapy received

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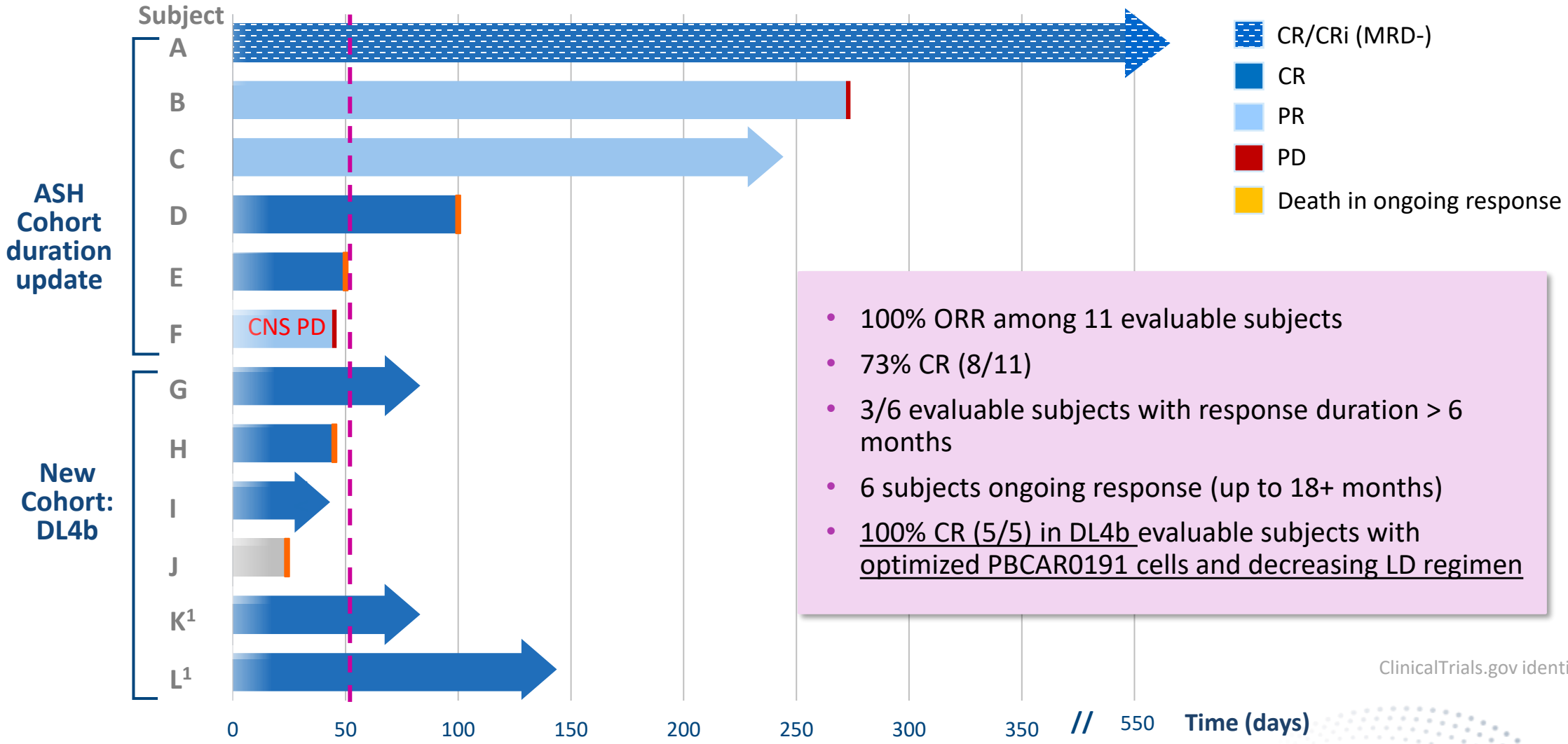
PCAR0191 Response Rate and Duration Exceeds Current Standard-of-Care for CAR T Relapsed Subjects



- 100% ORR among 11 evaluable subjects
- 73% CR (8/11)
- 3/6 evaluable subjects with response duration > 6 months
- 6 subjects ongoing response (up to 18+ months)
- <u>100% CR (5/5) in DL4b</u> evaluable subjects with <u>optimized PBCAR0191 cells and decreasing LD regimen</u>

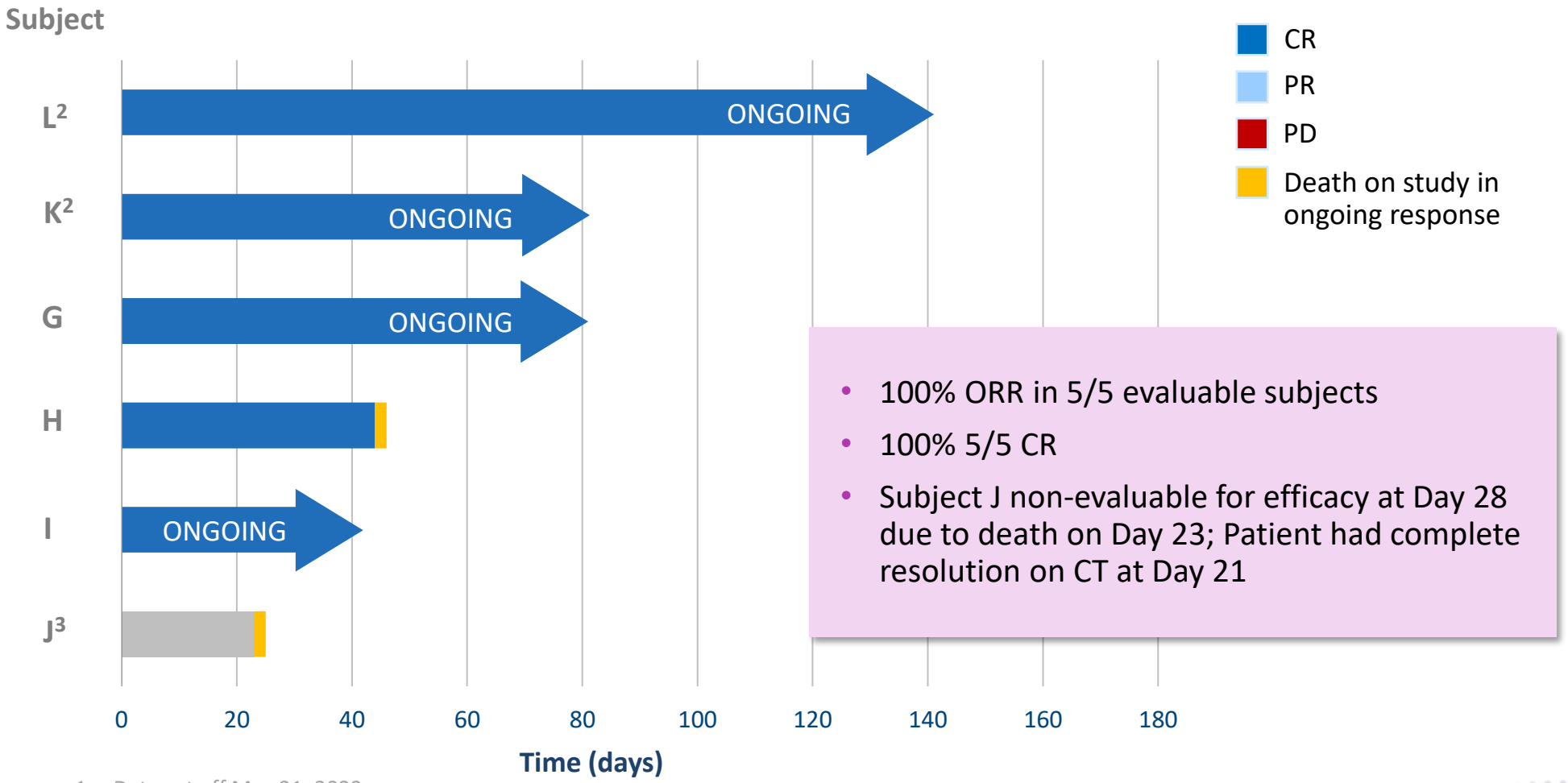
ClinicalTrials.gov identifier: NCT03666000

1 Subject K and Subject L relapsed after Allo CAR T, initially dosed at DL3. Original response: K – CR for 178 days before PD; L – PR for 28 days before PD

2. US CAR T Consortium Study - https://pubmed.ncbi.nlm.nih.gov/33156925/

PRECISION BIOSCIENCES

New Cohort: Optimized PBCAR0191 at Dose Level DL4b with Lower Dose LD Drove Optimal Response and Duration[1] in CAR T Relapsed Subjects



- 100% ORR in 5/5 evaluable subjects
- 100% 5/5 CR
- Subject J non-evaluable for efficacy at Day 28 due to death on Day 23; Patient had complete resolution on CT at Day 21

1. Data cut off May 31, 2022
2. Subject K and Subject L relapsed after Allo CAR T. Original response: K – CR for 178 days before PD; L – PR for 28 days before PD
3. Subject J was non-evaluable for efficacy at Day 28 assessment due to death from suspected fludarabine (Flu)-associated neurotoxicity on Day 23

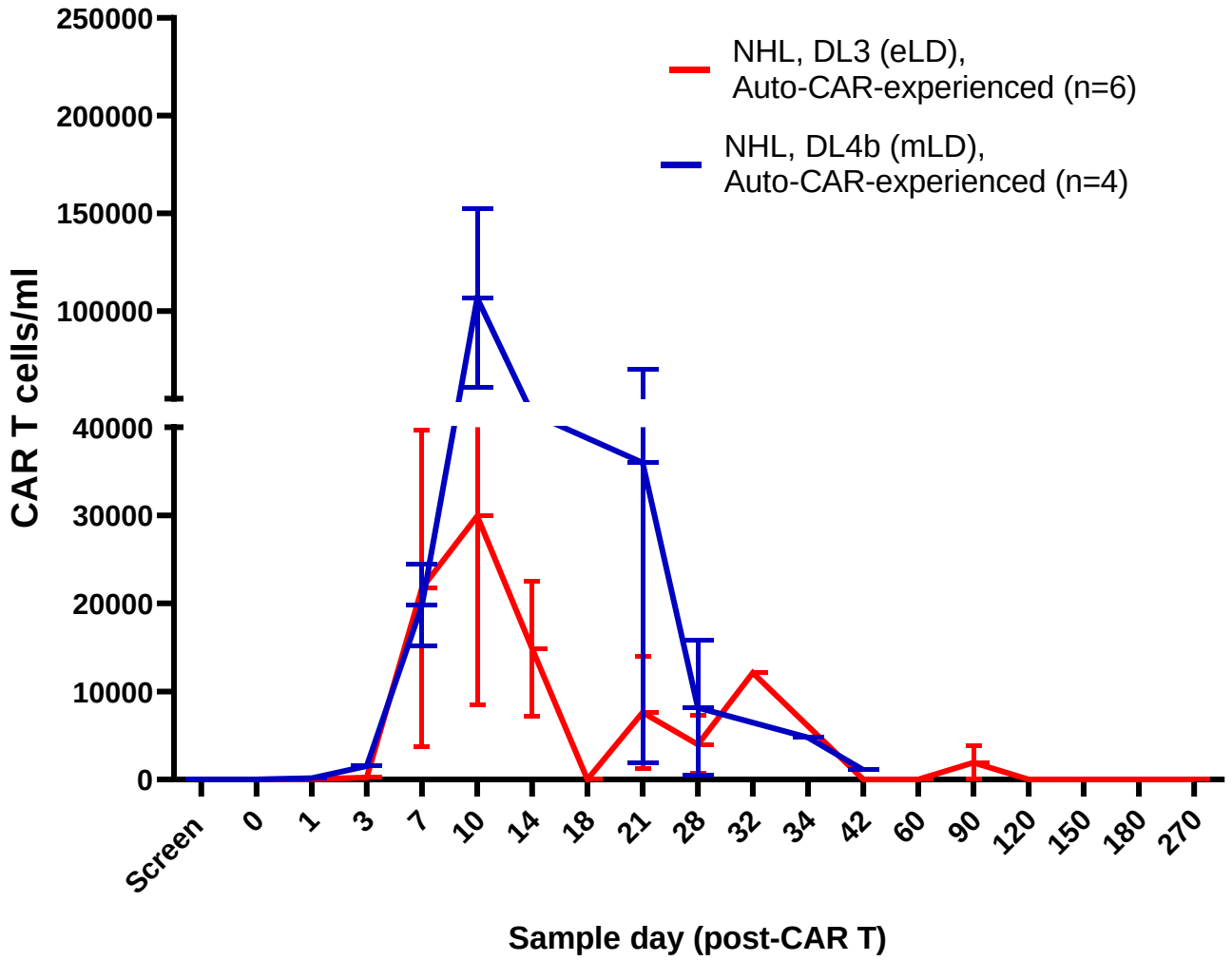
PRECISION BIOSCIENCES

ClinicalTrials.gov identifier: NCT03666000

Since ASH'21, Optimized PBCAR0191 Achieved Desired Peak Expansion Threshold with DL4b and Lower Dose LD

Cell Dose

Product Attributes



In DL4b/mLD group

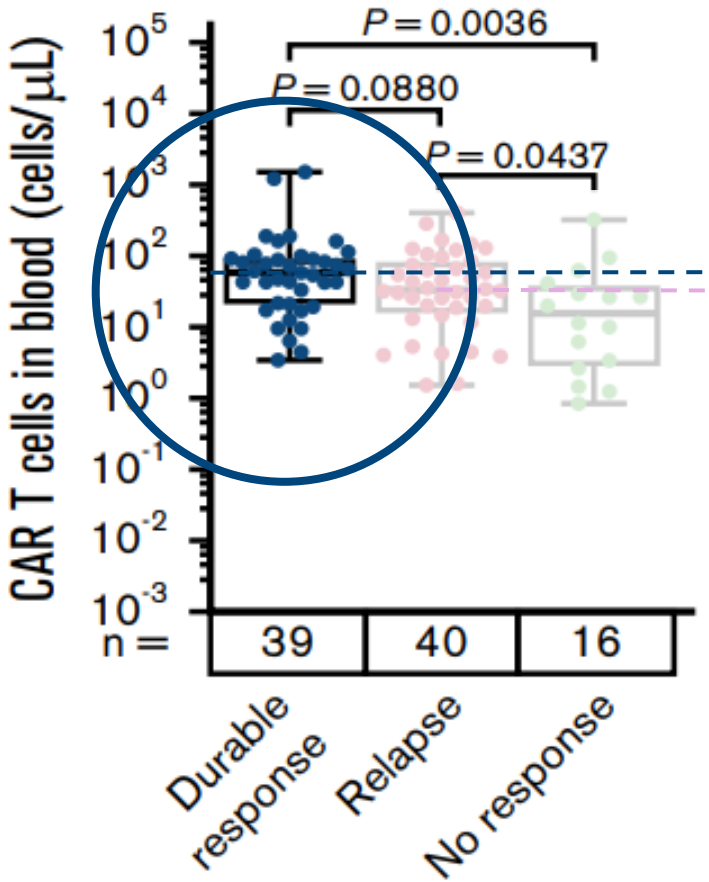
Mean peak expansion > **3X** greater

AUC > **3.5X** greater

PRECISION BIOSCIENCES

PBCAR0191 Peak Expansion Equivalent to Auto CAR T Levels in Long Term Durable Responders from ZUMA-1

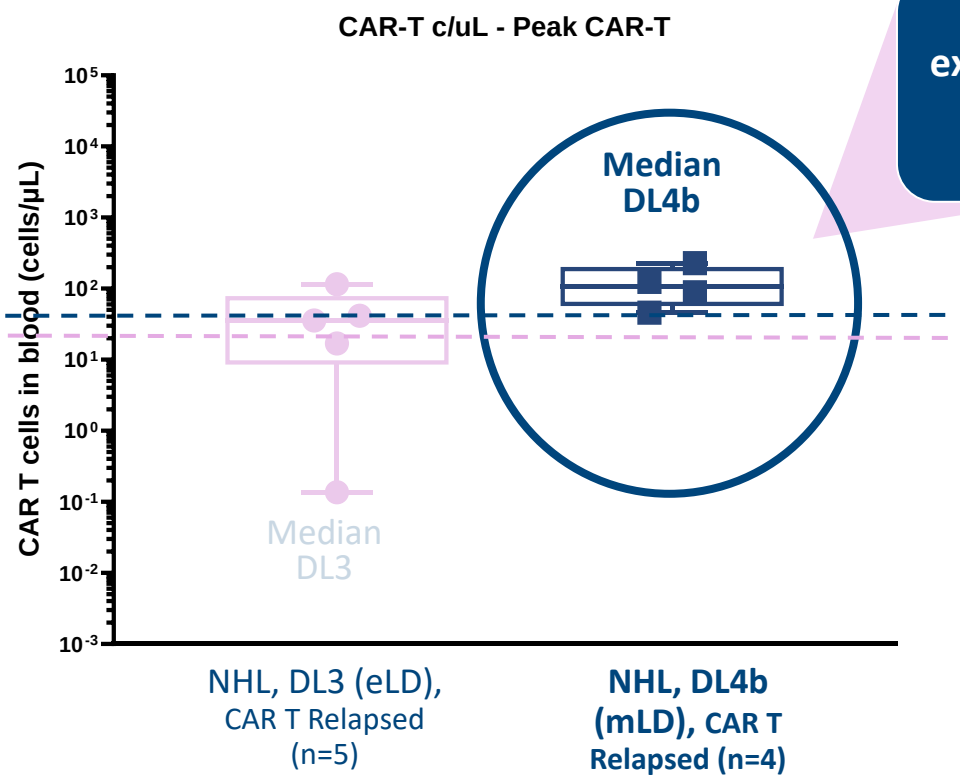
Auto CAR T Durable Responders (Locke et al, 2020)



Median, ZUMA-1 Durable responders

Median, ZUMA-1 Relapsed responders

PBCAR0191 NHL DL3 vs. DL4b subjects



PBCAR0191 exceeds ZUMA-1 Durable Responders[1]

1. Both ZUMA-1 and PBCAR01091 clinical study analyzed utilizing flow cytometry
2. "FOR ILLUSTRATIVE PURPOSES ONLY. Not a head to head comparison. Differences exist between trial designs and subject characteristics, and caution should be exercised when comparing data across studies."

PRECISION BIOSCIENCES

Safety:
Allogeneic PBCAR0191 for CAR T Relapsed Patients

PBCAR0191 AESI[1] Observed in CAR T Relapsed Subjects

Number (%) of subjects experiencing events with max grade			ASH Cohort (n=6)	New Cohort DL4b (n=6)
AE of special interest	CRS	*Grade 1 or Grade 2*	5 (83%)	4 (67%)
		Grade 3 or higher	0	0
	Time to onset (Days)	*Median (range)*	4 (4-14)	8 (7-9)
	ICANS	*Grade 1 or Grade 2*	2 (33%)	1 (17%)
		Grade 3 or higher[2]	1 (17%)	1 (17%)
	Time to resolution Grade 1 (Days)		1-2 days	1-2 days
	Time to onset (Days)	*Median (range)*	10 (2-14)	10 (8-12)
	GvHD		0	0
Other notable AEs	Infection	*Grade 1 or Grade 2*	0	2 (33%)
		Grade 3 or higher	4 (67%)	1 (17%)
	Grade 5 events[3]		2 (33%)[3]	2 (33%)[4]

Data cutoff as of May 31, 2022

1. AESI-Adverse Events of Special Interest
2 Time to resolution Grade 1 ICANS 1-2 days
3. Two deaths in the ASH Cohort related to infections and suspected fludarabine associated neurotoxicity
4. Two deaths in new Cohort related to suspected fludarabine associated neurotoxicity

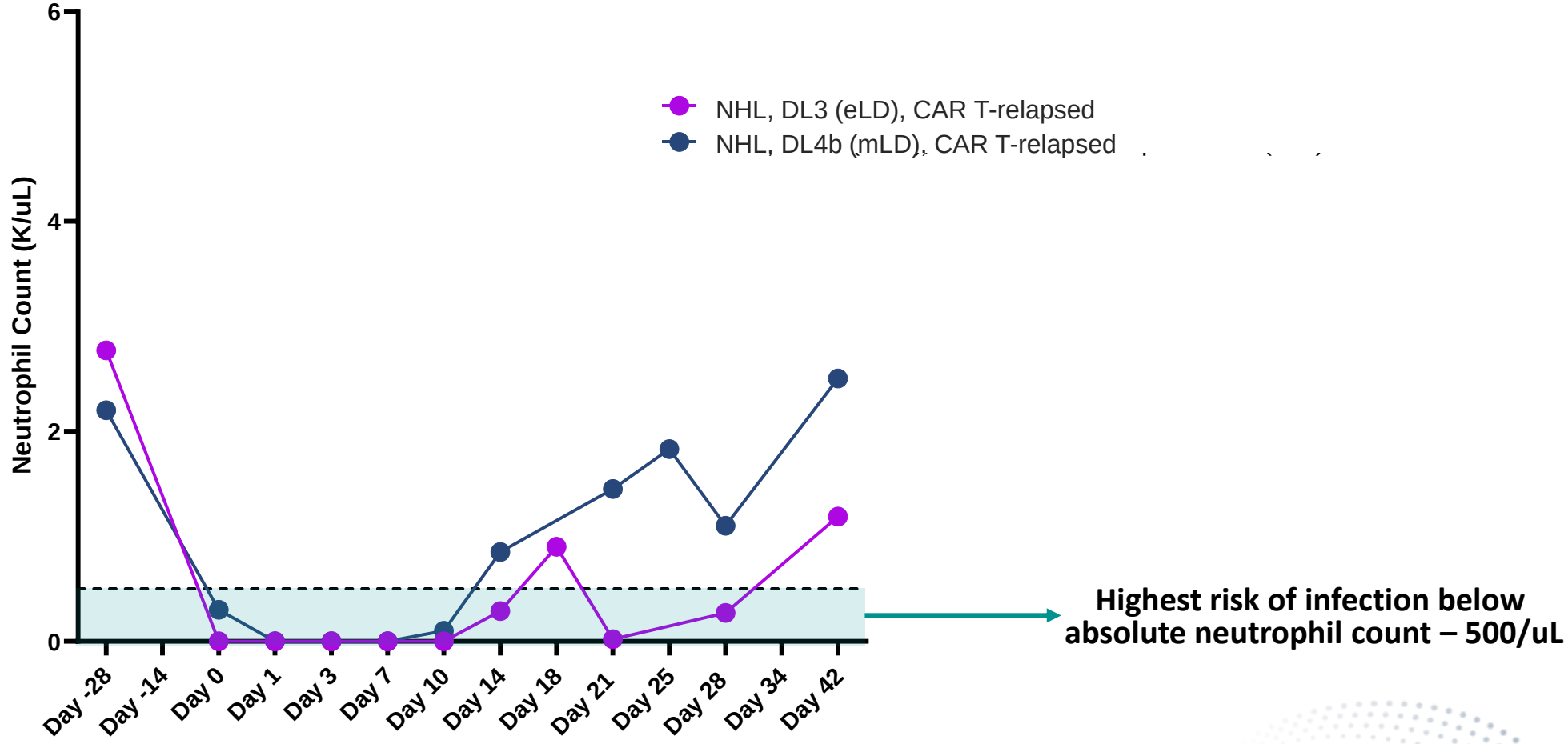
PRECISION BIOSCIENCES

ClinicalTrials.gov identifier: NCT03666000

Improving Upon ASH'21: Median Hematologic Recovery Achieved Earlier by Lowering LD Dose

Lymphodepletion

Median Absolute Neutrophil Count (ANC) Recovery



PRECISION BIOSCIENCES

PBCAR0191 Efficacy Results in CAR T Relapsed Subjects Exceeds Current Standard-of-Care with Improved Hematologic Recovery in Lower LD Subjects

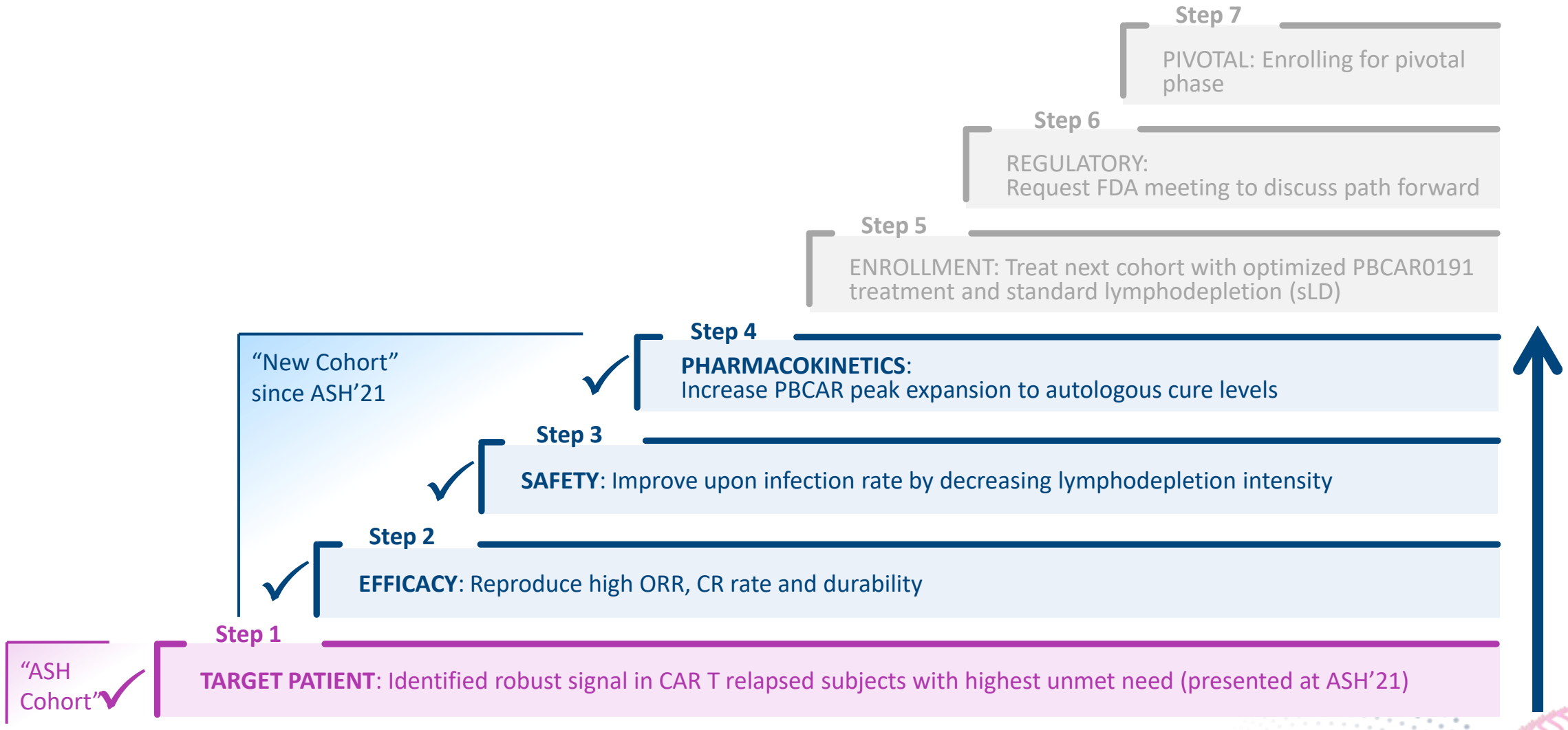
Interim Results[1]

- Overall response, CR rate and duration of response validates ASH'21 signal in CAR T relapsed subjects
  - 100% ORR and 73% CR among 11 evaluable subjects
  - 50% > six-month duration of response in evaluable subjects[2,3] (ranging from 7 to 18+ months)
  - 4 additional ongoing responders had not yet reached six months (ranging 2-5 months)
- Optimized PBCAR0191 attributes with decreasing LD achieved a desirable and competitive therapeutic index in CAR T relapsed patients
  - 100% CR in DL4b with decreasing LD intensity in evaluable subjects
  - Peak CAR T expansion reached levels achieved in auto-CAR T subjects with durable responses/cures
  - Decreasing to mLD led to hematologic recovery by Day 14 without compromising efficacy results
    - Significantly reduced grade ≥3 LD infection rate from 67% to 17%
    - Two mLD deaths with suspected fludarabine-associated neurotoxicity
- CAR T safety: No Grade 3 or greater CRS; 1 Grade 3 ICANS that rapidly resolved to Grade 1
- Given achievement of desired CAR T peak expansion with optimized PBCAR0191 at DL4b,next step to apply standard LD to further reduce toxicities related to LD in this fragile CAR T relapsed patient population

1. Interim efficacy and safety data as of May 31, 2022.
2. Durable responses in 3/6 subjects evaluable at 6 months
3. 4 of 6 (67%) evaluable subjects have achieved remission inversions when compared against prior therapy received

PRECISION BIOSCIENCES

In Conclusion, PBCAR0191 Path to Desired Product Profile for CAR T Relapsed Patients Nears Finish Line



PRECISION BIOSCIENCES

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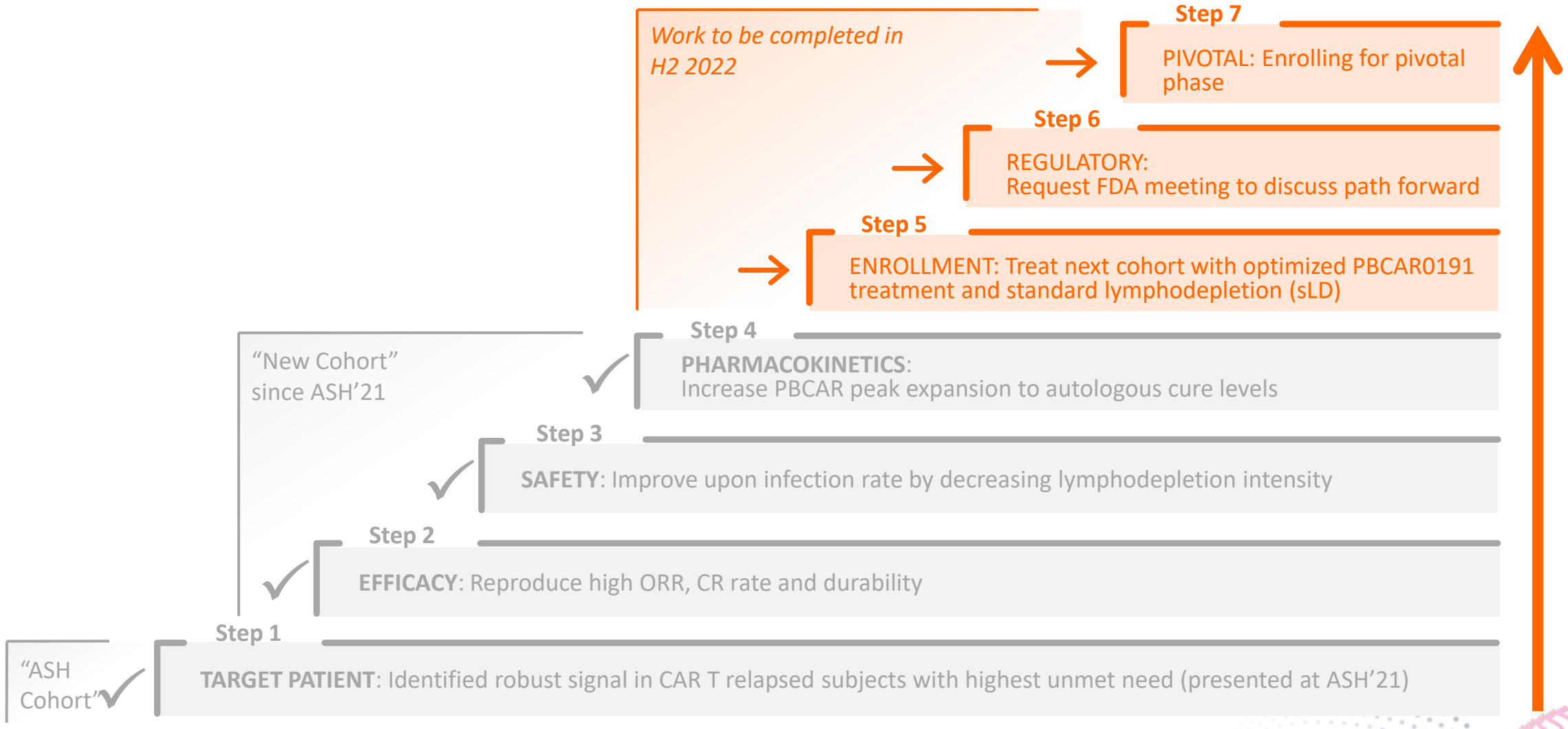


Ex Vivo CAR T Pipeline Focused on Potential First-in-Class and Best-in-Class Approaches

Data presentation for today

Potential First-in-Class

PBCAR0191
in CAR T
Relapsed DLBCL

PBCAR0191 Goal:
- *Provide urgent solution to CAR T relapsed patients with dire need*
- *First approved allo-CAR T therapy*
- *First approved gene-edited therapy*

Operational program updates

Potential Best-in-Class

PBCAR19B "Stealth Cell"
2nd/3rd Line NHL

PBCAR269A Combo
in R/R Multiple Myeloma

Best-in-Class Program Goals:
- *Displace autologous CAR T in earlier line patients for CD19/NHL and BCMA/R/R multiple myeloma*

PRECISION BIOSCIENCES

PBCAR19B is an Anti-CD19 “Stealth Cell” CAR T

Winning Best-in-Class is not a race – It’s about replacing Auto CAR T

Anti-CD19 CAR
TCR is knocked-out to prevent GvHD

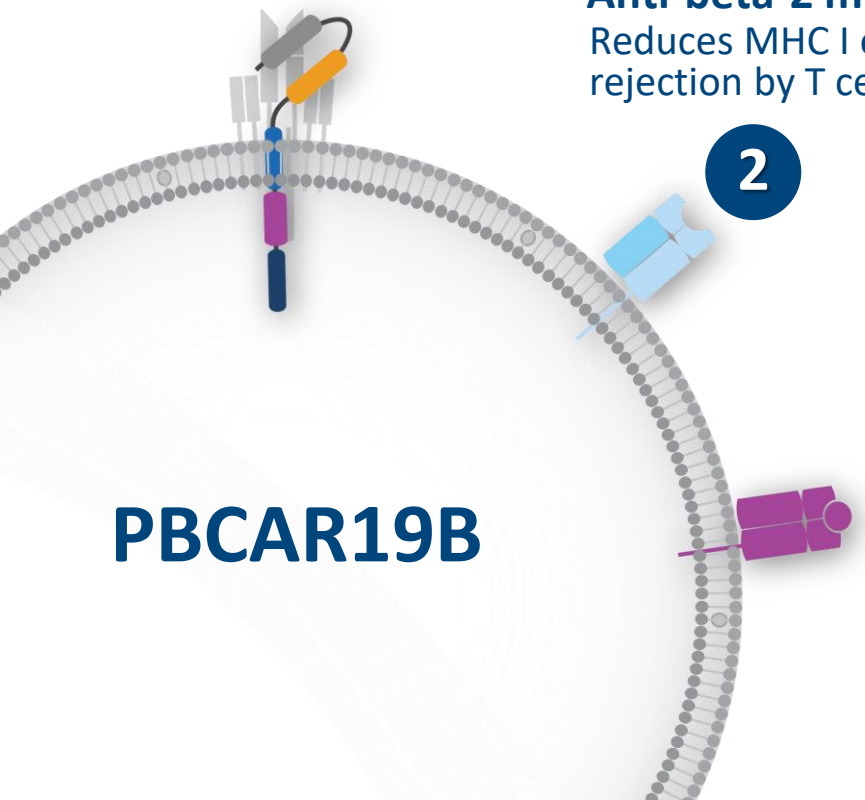
1

Anti-beta-2 microglobulin (β2m) shRNA
Reduces MHC I expression to prevent rejection by T cells

2

HLA-E transgene
Prevents rejection by NK cells

3



PBCAR19B

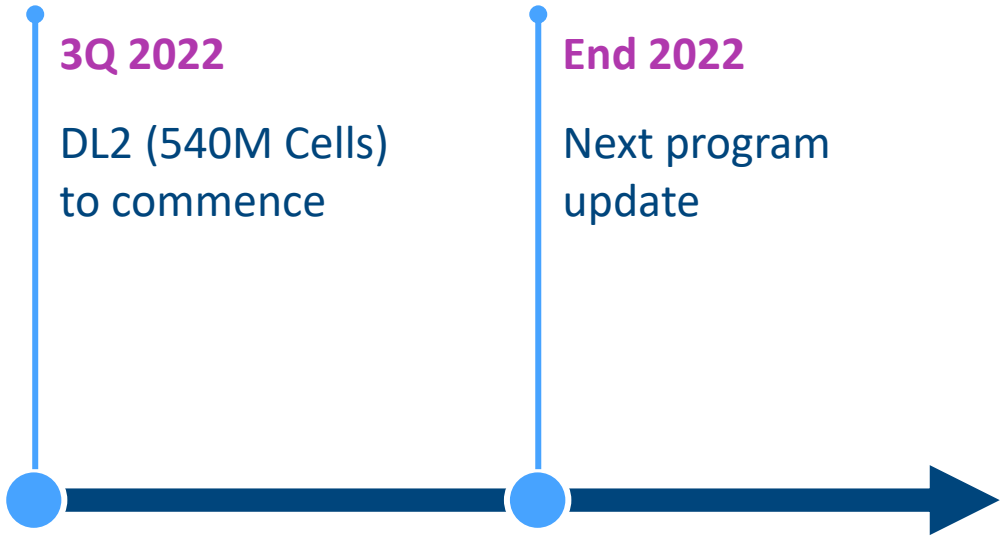
3rd line+ NHL TPP to Replace Auto CAR T	
Median Overall Survival (mOS)	~26 months[3]
Overall Response Rate (ORR)	> 70% at 28 days
Duration of Response (DoR)	~35% at 6 months to 1 year+
Safety	Same or better than Auto CAR T
Expected Regulatory Hurdle	Head-to-head vs. Auto CAR T

PBCAR19B Program Update: Potential Auto CAR T Displacement

PBCAR19B
"Stealth Cell"

- Three patients dosed at DL1 (270M Cells) + sLD
- Due to prioritization of PBCAR0191 as potential first-in-class, PBCAR19B strategically paused in Q1 to implement next manufacturing process optimization for allogeneic platform
- Manufactured lots with new optimized process completed in Q2
- Expect to commence dosing at DL2 (540M cells) in third quarter of 2022
- Next program update planned around year end 2022

Next Steps



PRECISION BIOSCIENCES

Update on PBCAR269A with Nirogacestat[1] in R/R Multiple Myeloma

PBCAR269A

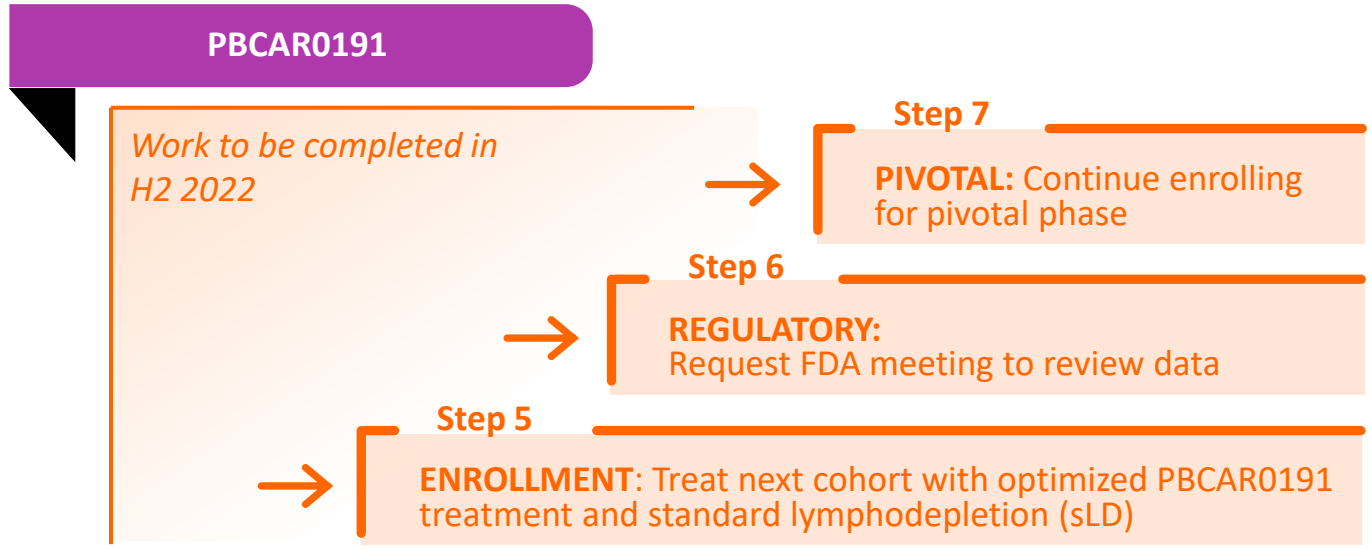
Combination with gamma secretase inhibitor (GSI) for Multiple Myeloma

- Completed Dose Level 2 (2.0×10^6 cells/kg) + GSI (nirogacestat) in six patients
  - Peak expansion equivalent to Dose Level 4 (960×10^6 cells flat dose) monotherapy
  - No dose limiting toxicities observed
  - Overall and depth of response at Dose Level 2 with GSI below desired target product profile
  - Continue Phase 1 dose finding and escalate PBCAR269A dose with nirogacestat arm only
- Dosing commencing at Dose Level 3 with GSI this week
- Next program update planned around year end 2022

PRECISION BIOSCIENCES

1 Gamma secretase inhibitor provided by SpringWorks THERAPEUTICS

What to Expect in 2H 2022: Disciplined Focus on Executing Remaining Steps on Path to Pivotal



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PRECISION BIOSCIENCES

PRECISION BIOSCIENCES

Mid-Year 2022
Allogeneic CAR T Pipeline Update

June 8, 2022