



Dima, Tristan, & Stephanie



Corporate Presentation

June 2024

Forward Looking Statements

This presentation contains forward-looking statements and information within the meaning of The Private Securities Litigation Reform Act of 1995. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “target,” “should,” “would,” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Forward-looking statements in this presentation include statements regarding the initiation, timing, progress and results of the Company’s preclinical and clinical studies and its research and development programs, including establishing in vivo proof-of-concept for an undisclosed indication in 2024, the timing for the Company’s receipt and presentation of data from its clinical trials and preclinical studies, including an additional clinical data update by year-end 2024, the potential of, and expectations for, the Company’s product candidates, the timing or likelihood of regulatory filings and approvals, the Company’s expectations regarding commercial readiness, and the Company’s expectations regarding cash runway. The Company may not actually achieve the plans, intentions, or expectations disclosed in these forward-looking statements, and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various important factors, including: uncertainties inherent in the initiation and completion of pre-clinical studies and clinical trials, including the RUBY and EdiTHAL trials, and clinical development of the Company’s product candidates, including reni-cel; availability and timing of results from pre-clinical studies and clinical trials; whether interim results from a clinical trial will be predictive of the final results of the trial or the results of future trials; expectations for regulatory approvals to conduct trials or to market products and availability of funding sufficient for the Company’s foreseeable and unforeseeable operating expenses and capital expenditure requirements. These and other risks are described in greater detail under the caption “Risk Factors” included in the Company’s most recent Annual Report on Form 10-K, which is on file with the Securities and Exchange Commission, as updated by the Company’s subsequent filings with the Securities and Exchange Commission, and in other filings that the Company may make with the Securities and Exchange Commission in the future. Any forward-looking statements contained in this presentation represent Company’s views only as of the date hereof and should not be relied upon as representing its views as of any subsequent date. Except as required by law, the Company explicitly disclaims any obligation to update any forward-looking statements.

Editas Medicine is a Leader in the CRISPR-based Gene Editing Medicine Field



- Our lead product candidate, reni-cel, is an investigational gene editing medicine that is a potential “best in class” treatment for sickle cell disease and beta thalassemia
- Ongoing RUBY and EdiTHAL clinical trials



- Editas holds an exclusive license to foundational IP for Cas9 and Cas12a for the prevention or treatment of human disease from the Broad Institute and Harvard University
- Source of non-dilutive capital
 - Granted Cas9 sublicenses, including non-exclusive licenses to Vertex Pharmaceuticals and Vor Bio



- Proprietary AsCas12a is a high fidelity and high efficiency CRISPR nuclease
- Core expertise in guide RNA design and chemistry for high precision editing
- Longer-term focus on creating important medicines based on *in vivo* gene editing
- Scaled Chemistry, Manufacturing, and Controls (CMC)



- Leadership team with a proven track record of drug development and commercialization

Strategic Framework

(From the 2023 J.P. Morgan Healthcare Conference)



Platform



Commercial Stage



Drive reni-cel (EDIT-301)
toward BLA and
Commercialization

Strengthen and Focus
Discovery to Build *in vivo*
Editing Pipeline

Increase Business
Development Activities
and Monetize IP

Long-Term Vision: A Leader in *In Vivo* Programmable Gene Editing

Strategic Transformation Toward Long-Term Vision

(From the 2023 J.P. Morgan Healthcare Conference)



Platform

Commercial Stage



Drive reni-cel (EDIT-301) toward BLA and Commercialization

- ✓ Continue *ex vivo* development of reni-cel (EDIT-301) for SCD, TDT
 - ✓ Enroll 20 patients in RUBY study by year-end
 - ✓ Provide RUBY and EdiTHAL data updates by mid-year and year-end
- ✓ Divest wholly-owned cell therapy program, continue supporting partnered cell therapy programs
- ✓ Terminate AAV IRD programs

Strengthen and Focus Discovery to Build *in vivo* Editing Pipeline

- ✓ Focus on *in vivo* pipeline build
- ✓ Hire new CSO with specific expertise aligned with Editas' vision
- ✓ Reset discovery and technology group
- ✓ Initiate discovery of *in vivo* editing of HSCs and in other tissues

Increase Business Development Activities and Monetize IP

- ✓ Create value through business development to complement core gene editing technology capabilities
- ✓ Leverage robust IP portfolio
 - ✓ Vertex sublicense for exa-cel

Long-Term Vision: A Leader in *In Vivo* Programmable Gene Editing

2024 Strategic Objectives

Drive reni-cel (EDIT-301) toward BLA and Commercialization

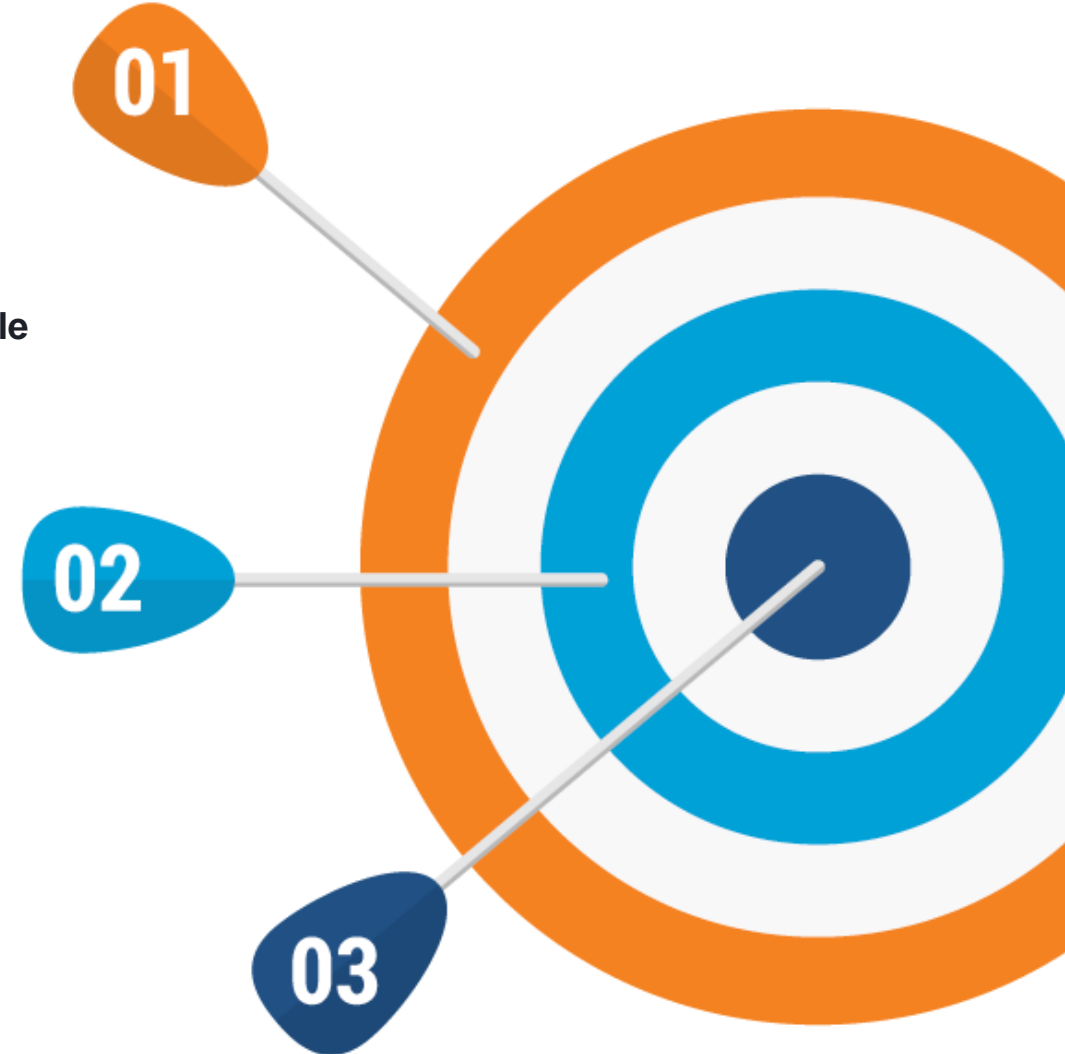
- **Continue enrollment and dosing** in the RUBY and EdiTHAL trials of reni-cel
- **Initiate the adolescent cohort** in the RUBY trial
- **Present a substantive clinical data set of Sickle cell patients with considerable clinical follow-up** in the RUBY study in mid-2024 and by year-end 2024

Strengthen and Focus Discovery to Build *in vivo* Editing Pipeline

- **Establish *in vivo* preclinical proof-of-concept for an undisclosed indication**
 - Focus on disease targets with high probability of technical, clinical, regulatory, and commercial success
 - Initial focus on hematopoietic stem cells (HSCs)

Increase Business Development Activities and Monetize IP

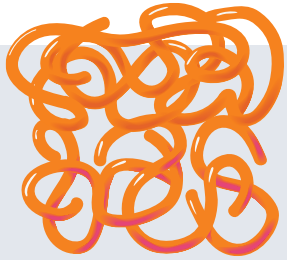
- **Derive revenue from the Company's foundational IP**, building on the recently announced license agreements with Vertex Pharmaceuticals and Vor Bio



Sickle Cell Disease (SCD) is an Inherited Life-Threatening Hematological Disorder Manifesting Shortly After Birth



SICKLE CELL DISEASE is a genetic blood disorder caused by mutations in the **HBB gene** that causes sickling of RBCs; this leads to **anemia, hemolysis, and VOs**^{1,2}



UPREGULATION OF FETAL HEMOGLOBIN (HbF) is a naturally validated therapeutic strategy to control complications of SCD

SCD AFFECTS^{3,4,5}

~100K



PEOPLE
IN THE U.S.

EDITAS EDITS THE HBG1 AND HBG2 PROMOTERS USING AsCAS12a ENZYME, AN APPROACH THAT IS DESIGNED TO:

- Upregulate HbF robustly
- Correct anemia with superior red blood cell production and health vs. BCL11A approach
- Reduce risk of off-target editing with high fidelity and high efficiency proprietary AsCas12a enzyme

Reni-cel is potentially a “best in class” medicine with consistent correction of anemia

HBB, β -globin gene; RBC, red blood cell; SCD, sickle cell disease; VOE, vaso-occlusive event.

1. Kato GJ *et al. Nat Rev Dis Primers* 2018; 4: 18010. 2. Williams TN *et al. Annu Rev Genomics Hum Genet* 2018; 19: 113–147. 3. Sickle Cell Disorders. Available at: <https://www.thelancet.com/pb-assets/Lancet/gbd/summaries/diseases/sickle-cell-disorders.pdf>. Accessed June 2023. 4. Wastnedge E *et al. J Glob Health* 2018; 8 (2): 021103. 5. Sickle Cell Disease. Available at: <https://www.nhlbi.nih.gov/health/sickle-cell-disease>. Accessed June 2023.

All Treated **RUBY** Patients Successfully Engrafted



DEMOGRAPHICS (N=18)

Genotype, n (%)	
β^S/β^S	17 (94.4)
β^S/β^0	1 (5.6)
Sex, n (%)	
Female	9 (50.0)
Age, years, median (min, max)	27.0 (18.0, 35.0)
Severe VOs, pre-study annual rate*, mean (SD)	5.2 (2.9)

APHERESIS, INFUSION, AND ENGRAFTMENT (N=18)

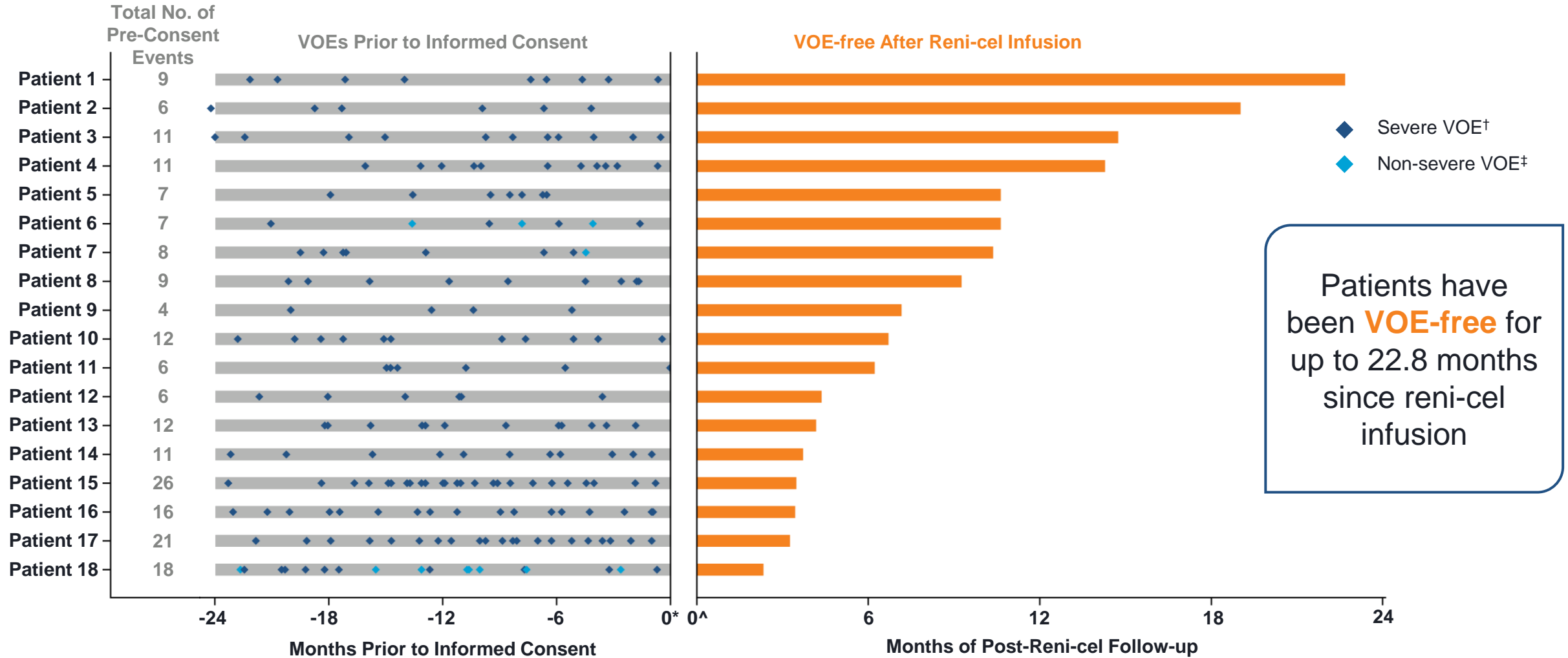
Number of mobilization and apheresis cycles [†] , median (min, max)	2.0 (1.0, 4.0)
Total reni-cel dose administered, $\times 10^6$ CD34 ⁺ cells/kg, median (min, max)	4.6 (2.9, 10.0)
Follow-up duration, months, median (min, max)	7.0 (2.4, 22.8)
Time to neutrophil engraftment [‡] , days, median (min, max)	23.0 (15.0, 29.0)
Time to platelet engraftment [§] , days, median (min, max)	24.0 (18.0, 51.0)

Data cutoff May 8, 2024.

*The pre-study period is defined as the 2-year period prior to informed consent. [†]Number of leukapheresis cycles for collection of sufficient cells for reni-cel manufacture and back-up rescue cells. Some patients underwent a cycle of leukapheresis solely for collection of rescue cells. [‡]Three consecutive measurements with absolute neutrophil count (ANC) $\geq 0.5 \times 10^9/L$. [§]Three consecutive measurements with platelet count $\geq 50 \times 10^9/L$ starting at least 7 days after the platelet transfusion, and 10 days after thrombopoietin (TPO). No TPO was used for patients after reni-cel infusion.

β , β -globin allele; *HbG*, γ -globin gene; max, maximum; min, minimum; reni-cel, renizgamlogene autogedtemcel; SCD, sickle cell disease; SD, standard deviation; VOE, vaso-occlusive event.

All Treated **RUBY** Patients are VOE-free Since Reni-cel Infusion



Patients have been **VOE-free** for up to 22.8 months since reni-cel infusion

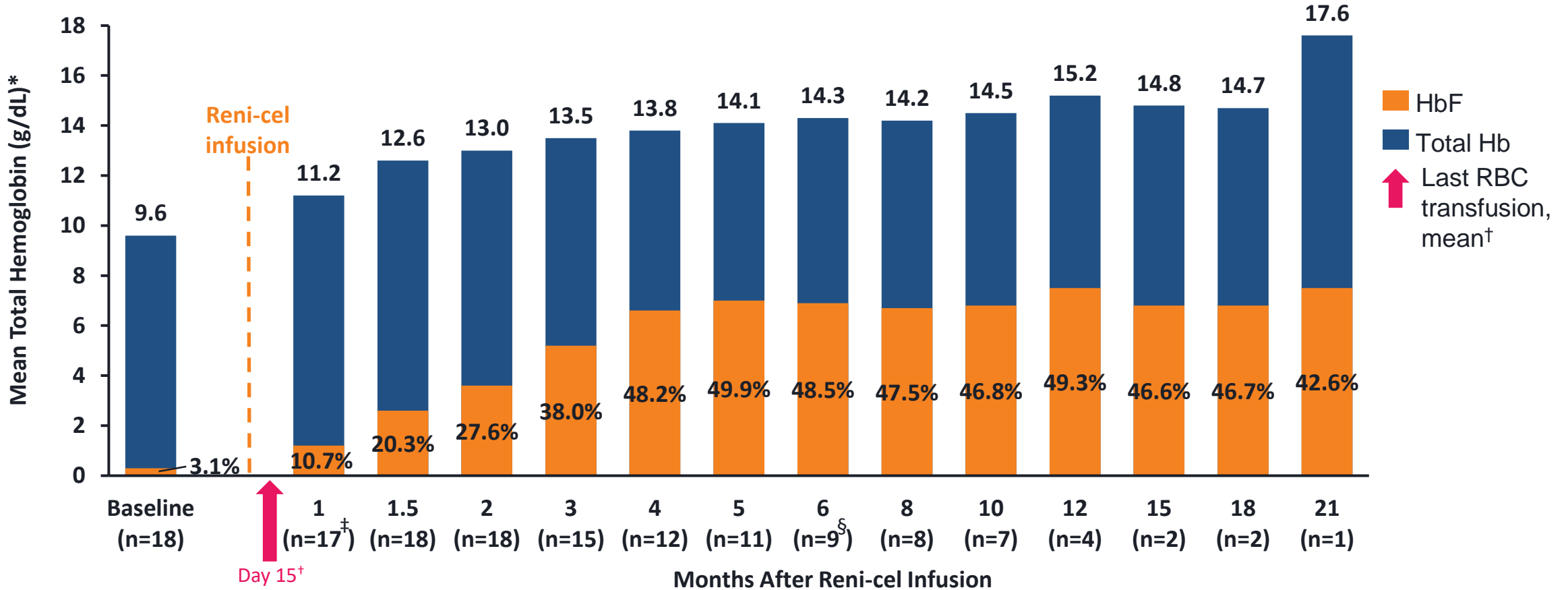
Data cutoff May 8, 2024.

Left panel ends at informed consent date: 0* is day of informed consent. Right panel starts at infusion date: 0^ is day reni-cel was infused.

[†]A severe VOE requiring medical attention (despite hydroxyurea or other supportive care measures in the pre-treatment period) is defined as: an acute episode of pain with no cause other than a vaso-occlusion, resulting in either a ≥24-h hospital or Emergency Room (ER) observation unit or ≥2 visits to a day unit or ER over 72 h with both visits requiring administration of pain medications; acute priapism lasting >2 h and requiring a visit to a medical facility (with or without hospitalization); acute chest syndrome (ACS), which is defined as chest-wall pain in association with findings of a new pulmonary infiltrate on chest X-ray films associated with fever and/or respiratory symptom; or hepatic or splenic sequestration, which is defined as a sudden increase in organ size associated with pain in the area of the organ, decrease in the hemoglobin concentration of ≥2 g/dL within a 24-h period, and, for liver sequestration, abnormal change in liver function tests, including conjugated bilirubin, not due to biliary tract disease. [‡]Non-Severe VOE is defined as an acute episode of pain with no medically determined cause other than a vaso-occlusion.

reni-cel, renizgamlogene autogedtemcel; SCD, sickle cell disease; VOE, vaso-occlusive event.

RUBY Patients had Rapid and Sustained Clinically Meaningful Improvements in HbF (>40%), with Early and Durable Normalization of Hb



Markers of hemolysis (reticulocyte count, indirect bilirubin, LDH, and haptoglobin) displayed a trend of **improvement** or have **normalized** in treated patients

Data cutoff May 8, 2024. Number of male patients = 9; number of female patients = 9. Bars show mean Hb (g/dL). Labels inside / next to the bars indicate mean proportion of HbF as a percentage of total Hb. Mean total Hb concentrations are shown directly above bars.

*Central laboratory reference range: 12.0–16.0 g/dL for females and 13.6–18.0 g/dL for males. †The last RBC transfusion in patients occurred a mean (SD) of 14.6 (5.6) days after reni-cel infusion (n=18). ‡One patient did not have central labs performed at Month 1 because of venous access issues. §n=10 for HbF percentage; total Hb and absolute HbF were not provided by the central lab at Month 6 for one patient because the sample was clotted. Hb, hemoglobin; HbF, fetal hemoglobin; LDH, lactate dehydrogenase; RBC, red blood cell; reni-cel, renizgamlogene autogedtemcel.

RUBY Patients Showed a Favorable Safety Profile and Safety of Reni-cel is Consistent with Myeloablative Conditioning with Busulfan and HSCT



TEAE CATEGORY	N=18	
	Number of patients (%)	Number of events
Any TEAE	18 (100)	374
Any TEAE related to reni-cel*	1 (5.6)	1
Any TEAE related to busulfan	18 (100)	206
Any serious TEAE†	7 (38.9)	9
Any serious TEAE related to reni-cel	0 (0)	0
Any Grade 3 or 4 TEAE	17 (94.4)	82
Any Grade 3 or 4 TEAE related to reni-cel	0 (0)	0
Any TEAE related to reni-cel leading to discontinuation	0 (0)	0
Any TEAE leading to death	0 (0)	0

No serious TEAEs were reported as related to reni-cel

Data cutoff May 8, 2024.

*One patient experienced a non-serious TEAE of Grade 1 Alanine aminotransferase increased ($1.2 \times$ ULN), which was reported to be causally related to reni-cel and busulfan. The TEAE has resolved, and alanine aminotransferase level normalized. †As of the data cut, serious TEAEs in the RUBY trial included gastroenteritis, gastroenteritis viral, pneumonia, sepsis, chills, and hyperglycemia.

HSCT, hematopoietic stem cell transplantation; reni-cel, renizgamlogene autogedtemcel; SCD, sickle cell disease; TEAE, treatment emergent adverse event; ULN, upper limit of normal.

EdiTHAL Patients Successfully Engrafted, Experienced Similar Engraftment and Similar Safety Profile to RUBY Patients

DEMOGRAPHICS AND BASELINE CHARACTERISTICS

(N=7)

Genotype, n(%)	
β^0/β^0 or β^0/β^0 -like*	3 (42.9)
Non- β^0/β^0 †	4 (57.1)
Sex, n (%)	
Female	4 (57.1)
Age, years, median (min, max)	19.0 (18.0, 24.0)
Packed RBC transfusions, pre-study annual rate‡, mL/kg/year, mean (SD)	153.5 (52.9)

APHERESIS, INFUSION, AND ENGRAFTMENT

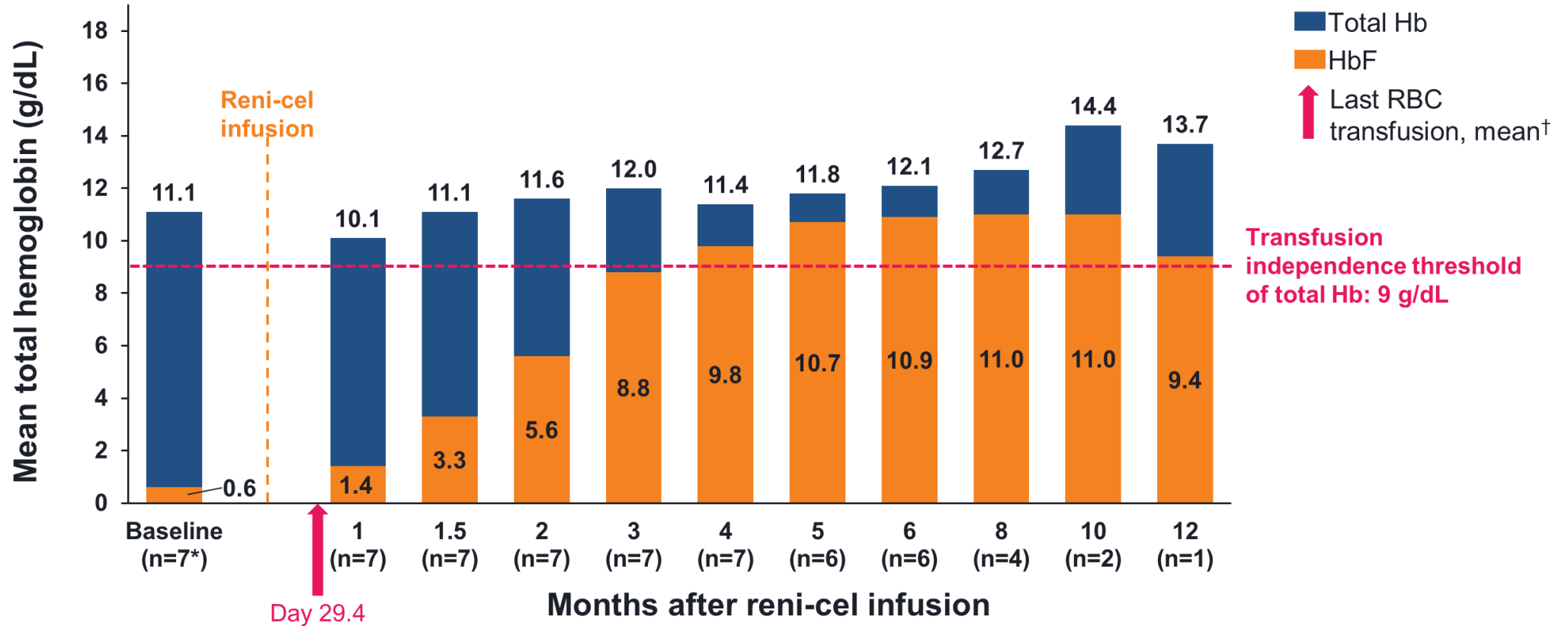
(N=7)

Number of mobilization and apheresis cycles, median (min, max)	1.0 (1.0, 1.0)
Total reni-cel dose administered, $\times 10^6$ CD34 ⁺ cells/kg, median (min, max)	6.7 (5.7, 11.9)
Follow-up duration, months, median (min, max)	8.8 (4.7, 13.4)
Time to neutrophil engraftment§, days, median (min, max)	23.0 (16.0, 30.0)
Time to platelet engraftment , days, median (min, max)	38.0 (24.0, 49.0)

- Safety profile is consistent with myeloablative busulfan conditioning and autologous HSCT
- No serious adverse events (SAEs) related to reni-cel were reported after reni-cel infusion

* β^0/β^0 -like includes IVS-I-110/ IVS-I-110 (n=1). †Non- β^0/β^0 includes β^0/β^+ (n=3) and β^E/β^0 (n=1). ‡The pre-study period is defined as the 2-year period prior to informed consent. §Three consecutive measurements with absolute neutrophil count (ANC) $\geq 0.5 \times 10^9/L$. ||Three consecutive measurements with platelet count $\geq 20 \times 10^9/L$ starting at least 7 days after the platelet transfusion and 10 days after thrombopoietin (TPO). IVS, intervening sequence; max, maximum; min, minimum; RBC, red blood cell; reni-cel, renizgamglogene autogedtemcel; SD, standard deviation.

Following Reni-cel Infusion, Mean Total Hb and HbF Increased and **EdiTHAL** Patients Total Hb Above the Transfusion Independence Threshold



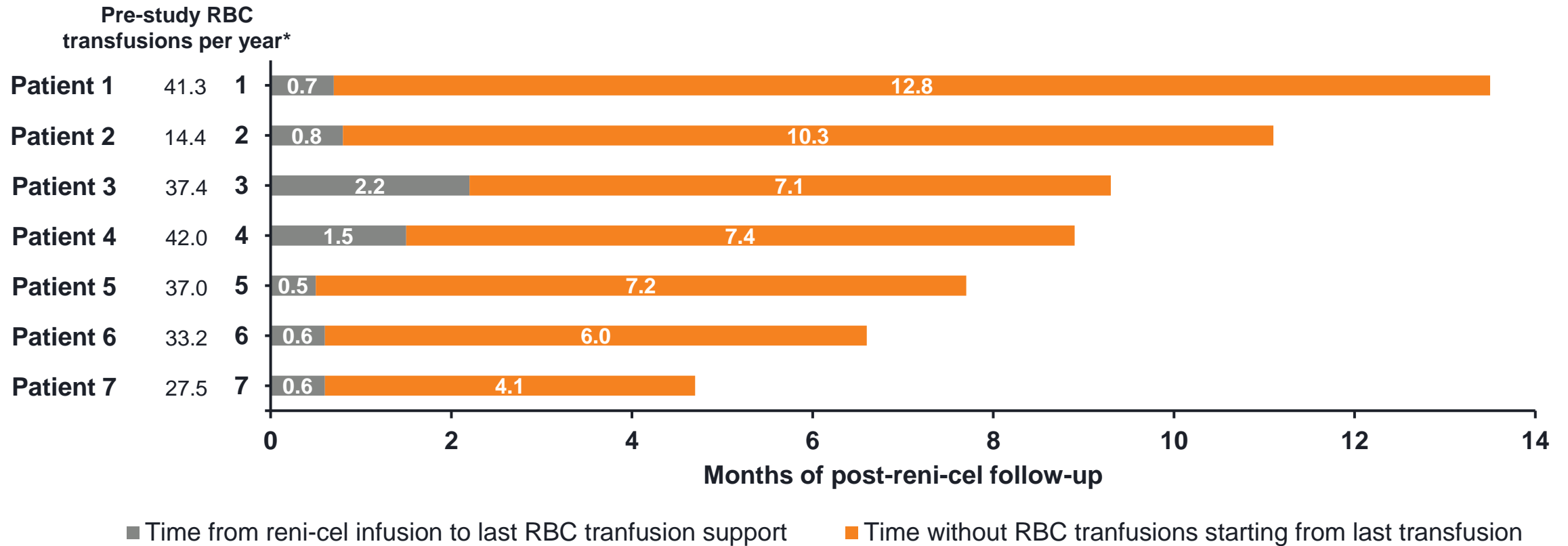
- All patients maintained Hb levels above the transfusion threshold at last follow-up.
- The mean (SD) HbF concentration increased early and was 10.9 (1.5) g/dL by Month 6 (n=6).
- The mean (SD) percentage of F-cells was 99.2% (0.8%) by Month 6 (n=5).

Bars show Hb (g/dL). Labels inside/next to the bars indicate mean levels of HbF (g/dL). Mean total Hb concentrations are shown directly above bars (g/dL).

*At baseline n=6 for HbF. †The last RBC transfusion in patients occurred a mean (SD) of 29.4 (19.1) days after reni-cel infusion (n=7).

Hb, Hemoglobin; HbF, fetal hemoglobin; RBC, red blood cell; reni-cel, renizgamglogene autogedtemcel; SD, standard deviation.

EdiTHAL Patients Have Been Transfusion-free For Up to 12.8 Months After Reni-cel Infusion



- After receiving the last RBC transfusion at 0.5–2.2 months post-reni-cel infusion, all 7 patients have been transfusion free for a range of 4.1–12.8 months.

Labels inside bars indicate number of months.

*Number of transfusion units annualized over 2 years.

RBC, red blood cell; reni-cel, renizgamglogene autogedtemcel.

Reni-cel's Rational Design: Target Selection AND CRISPR Enzyme Matter in Building a Medicine to Give Best Outcomes to Patients

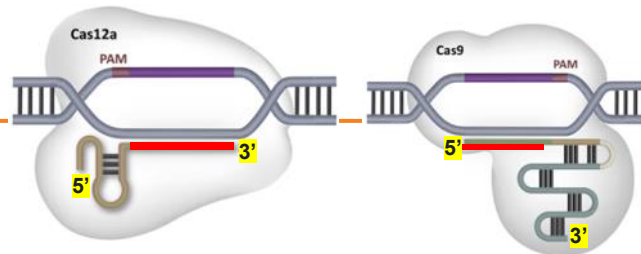
TARGET

	<i>HBG1 and HBG2</i>	<i>BCL11A</i>
RBC Production	Normal	Reduced
Proliferative capacity	Normal	Reduced
RBC Health	Normal	Reduced
Mimics Natural HPFH	Yes	No

HBG1 and HBG2 promoters are a **more appropriate genomic target** versus *BCL11A* for RBC production^{1,2}

ENZYME

	<i>AsCas12a</i>	<i>Cas9</i>
Specificity	Higher	Lower
Editing Efficiency	Higher	Lower



AsCas12a

Cas9

AsCas12a is a **differentiated CRISPR nuclease** with **higher specificity** and **efficiency** compared with *Cas9*^{1,4}

Images from Moon *et al.* 2019.³

BCL11A, B-cell lymphoma/leukemia 11A gene; *Cas9*, CRISPR-associated protein 9; *AsCas12a*, CRISPR-associated protein 12a; CRISPR, clustered regularly interspaced short palindromic repeats; *HBG*, γ -globin gene; HPFH, hereditary persistence of fetal hemoglobin; RBC, red blood cell.
 1. Editas Medicine. Data on file. 2. Chang *et al.* Oral presentation at ASH 2018; San Diego, CA, USA, 2 December 2018. 3. Moon SB *et al.* *Trends in Biotechnology* 2019; 37 (8): 870-881. 4. Zhang L *et al.* *Nat Commun.* 2021; 12 (1): 3908.

Key Takeaways



Reni-cel drives early, robust correction of anemia to normal physiological range of total Hb for SCD



Reni-cel drives robust sustained increases in HbF >40%



No VOs seen to date in all dosed SCD patients



Reni-cel safety profile consistent with myeloablative busulfan conditioning and autologous HSCT



Initial Hb and HbF responses are consistent in SCD and TDT patients at the same follow-up time points

2024 Strategic Objectives

Drive reni-cel (EDIT-301) toward BLA and Commercialization

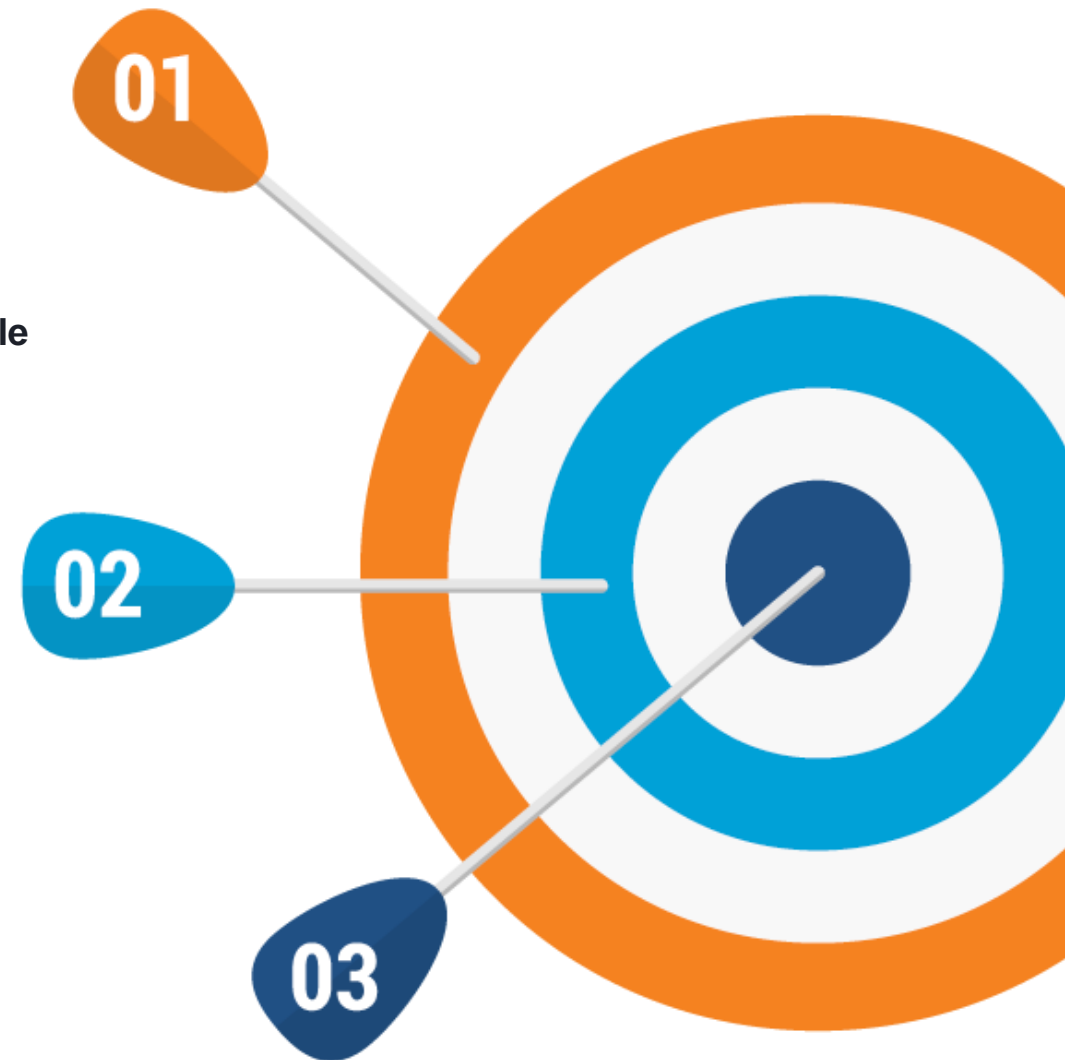
- **Continue enrollment and dosing** in the RUBY and EdiTHAL trials of reni-cel
- **Initiate the adolescent cohort** in the RUBY trial
- **Present a substantive clinical data set of Sickle cell patients with considerable clinical follow-up** in the RUBY study in mid-2024 and by year-end 2024

Strengthen and Focus Discovery to Build *in vivo* Editing Pipeline

- **Establish *in vivo* preclinical proof-of-concept for an undisclosed indication**
 - Focus on disease targets with high probability of technical, clinical, regulatory, and commercial success
 - Initial focus on hematopoietic stem cells (HSCs)

Increase Business Development Activities and Monetize IP

- **Derive revenue from the Company's foundational IP**, building on the recently announced license agreements with Vertex Pharmaceuticals and Vor Bio



Investment Highlights

Groundbreaking Science

Strong Leadership Team

Commercial Focus

World leading gene editing platform supported by foundational IP estate.

Shareholder value driven team with a proven track record of drug development & commercialization, strong domain expertise and focus on execution.

Lead asset renizgamlogene autogedtemcel (reni-cel) a potentially differentiated treatment for sickle cell disease and beta thalassemia.

Recent data at the European Hematology Association (EHA) Annual Meeting supporting differentiation, and an additional clinical data update expected by year end 2024.

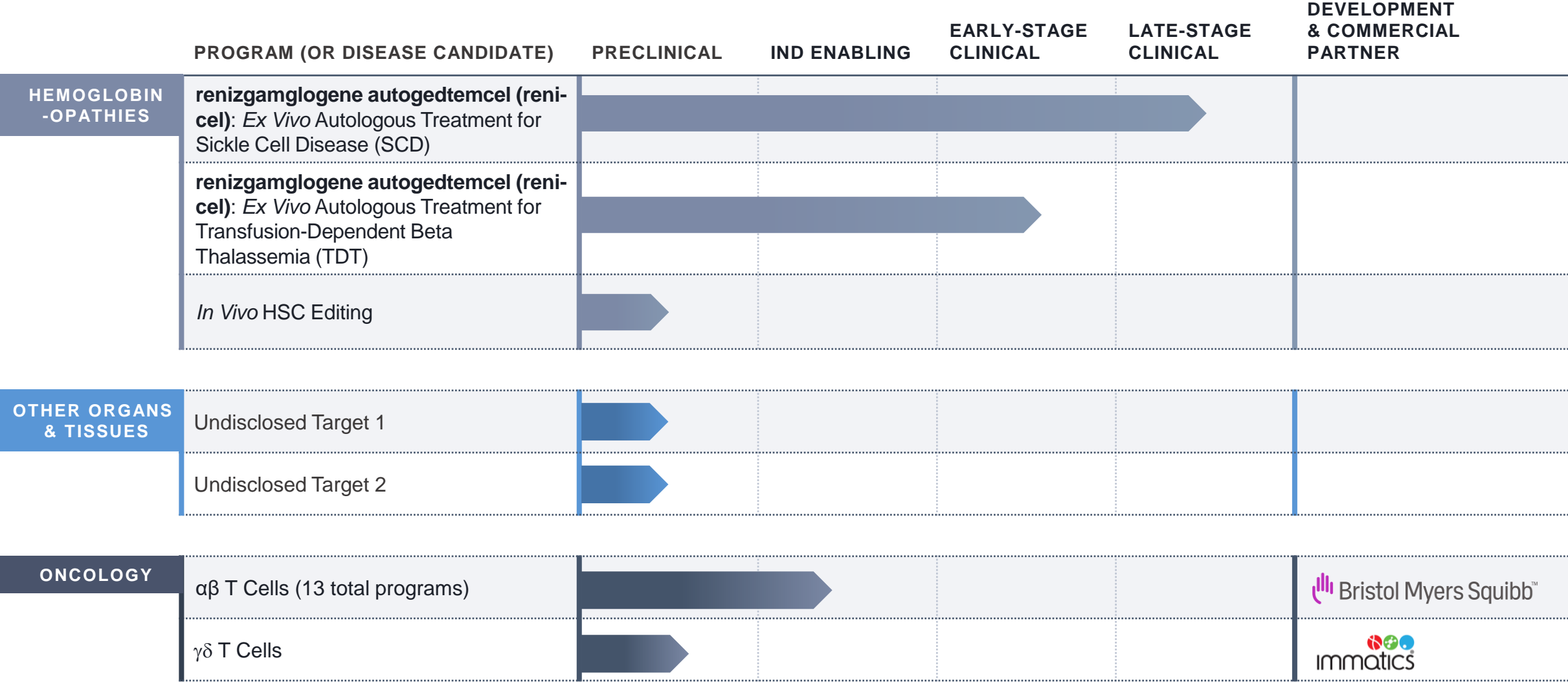
Disciplined, longer-term focus on creating important medicines for people living with serious diseases based on *in vivo* gene editing.

Strong cash position with operational runway into 2026.

Additional Information



Programs Positioned for Clinical Success



Experienced Team Focused on Delivering Shareholder Value



Gilmore O'Neill, M.B., M.M.Sc.
Chief Executive Officer
Prior experience: Sarepta • Biogen



Linea Aspesi
Chief People Officer
*Prior experience: Forma • Saniona • Sobi •
Sanofi/Genzyme*



Linda Burkly, Ph.D.
Chief Scientific Officer
Prior experience: Biogen



Caren Deardorf
Chief Commercial and Strategy Officer
Prior experience: Magenta • Ohana • Biogen



Erick Lucera
Chief Financial Officer
*Prior experience: AVEO Oncology •
Valeritas • Aratana*



Baisong Mei, M.D., Ph.D.
Chief Medical Officer
Prior experience: Sanofi • Biogen • Bayer



Charlene Stern, Ph.D., J.D.
General Counsel
*Prior experience: AVEO Oncology • Goodwin •
Foley Hoag*



Gregory Whitehead
Chief Technical and Quality Officer
*Prior experience: Rubius Therapeutics •
bluebird bio • Dendreon*