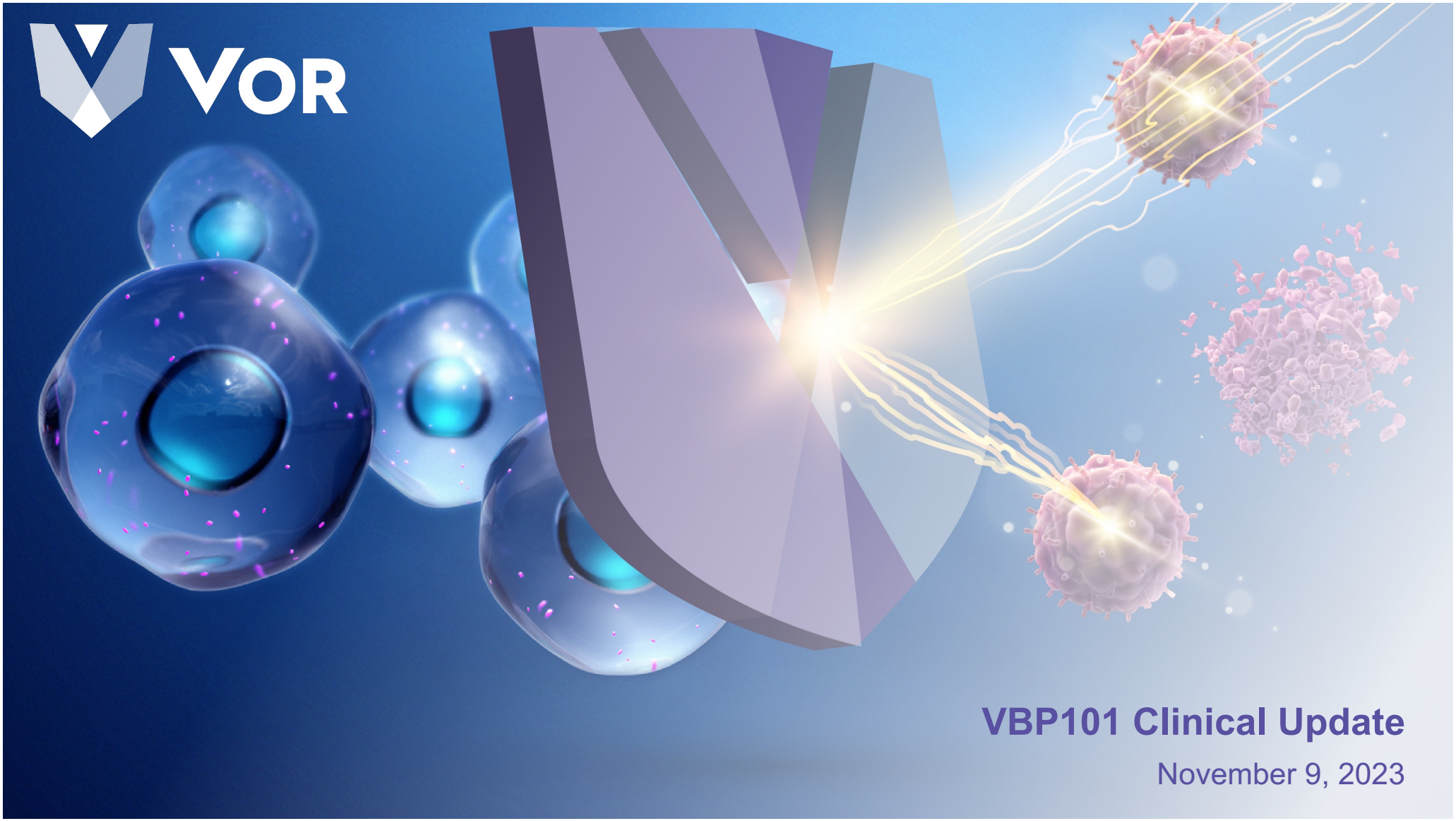
VOR
VBP101 Clinical Update
November 9, 2023

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Today's Agenda

Agenda	Speaker
Introductory Remarks	Robert Ang, MBBS, President & CEO
VBP101 Clinical Trial Update & Results	Eyal Attar, MD, Chief Medical Officer
Closing Remarks	Robert Ang, MBBS, President & CEO
Q&A	Robert Ang, MBBS, President & CEO Eyal Attar, MD, Chief Medical Officer Nathan Jorgensen, PhD, Chief Financial Officer

Introductory Remarks

Robert Ang, MBBS, President & CEO

Our Vision: Cure Blood Cancers Through Cell and Genome Engineering

Unique approach

shielded stem cell transplants enabling targeted therapy

Positive clinical proof of concept

demonstrated in AML with CD33-deleted trem-cel* transplants

VCAR33^{ALLO}

Fully owned CD33-directed transplant donor CAR-T

IND cleared

In-house GMP manufacturing facility

Four modular clean rooms for clinical supply

$160M

in cash, cash equivalents and marketable securities as of

Sept 30, 2023

*Tremtelectogene empogeditemcel, formerly VOR33

Current AML Disease State and Standard of Care

Standard of Care: Replace Diseased Bone Marrow with Transplanted Healthy Donor Cells

1 Conditioning

Toxic therapies to kill existing bone marrow

2 Harvest

Mobilize and collect stem cells from matched healthy donor

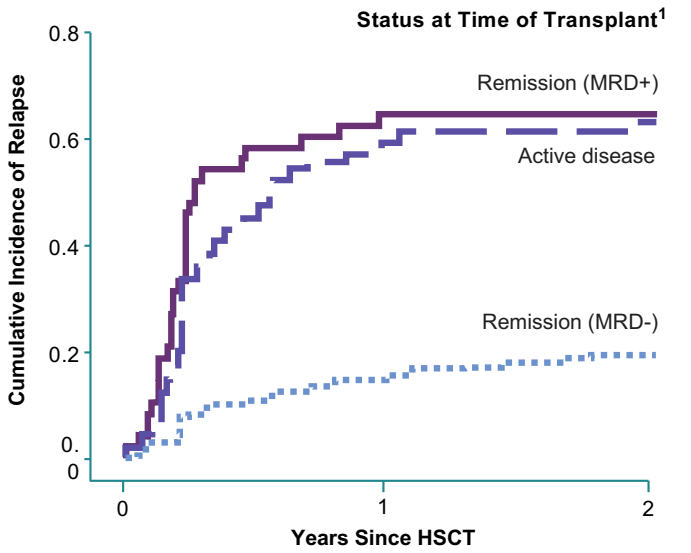
3 Transplant

Infuse stem cells into patient to restore the blood system

4 Watchful Waiting

Monitor for relapse; any follow-up treatment will damage the transplant

Despite transplantation, relapse is still common in AML patients

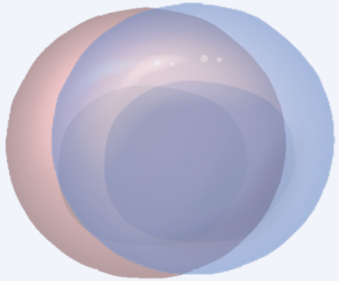


MRD: measurable residual disease; SOC: standard of care; HSCT: Hematopoietic Stem Cell Transplant

1 Araki et al, JCO 2016

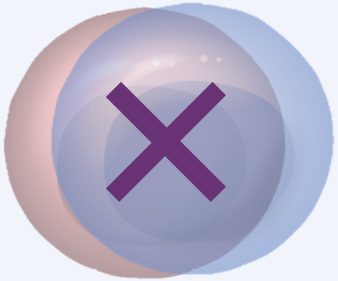
Changing the Thinking on Tumor Targeting

Biology:
Overlapping Targets



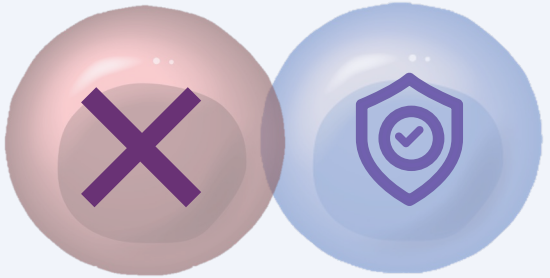
Cancer antigens also expressed on healthy cells

Problem:
On-target Toxicity



Limits treatment opportunities leading to poor outcomes

Solution:
Protected Transplants



Shielded transplants allowing therapies to be cancer-specific

VBP101 Clinical Trial Update

Eyal Attar, MD, Chief Medical Officer

VBP101: Trem-cel + Mylotarg Phase 1/2a Clinical Trial

Patient Journey

Transplant-eligible AML patients at high risk of relapse

Transplant Decision

Consolidation/Salvage

Conditioning

No delay in typical patient transplant process

Infusion

Engraftment

Maintenance Mylotarg

Starting ~day 60 up to 4 cycles dose escalation 0.5-2 mg/m^2

If relapse occurs:

- Induction-course Mylotarg
- VCAR33^{ALLO} (VBP301)
- Alternative treatments

Donor Journey

- Screening
  - Related
  - Unrelated
- Stem Cell Mobilization, Collection

Trem-cel Manufacturing ~7-day process

Unedited back-up graft

Key Endpoints

01 **Trem-cel engraftment**

02 **Heme protection from Mylotarg**

03 **Relapse-free survival**

Patient Characteristics

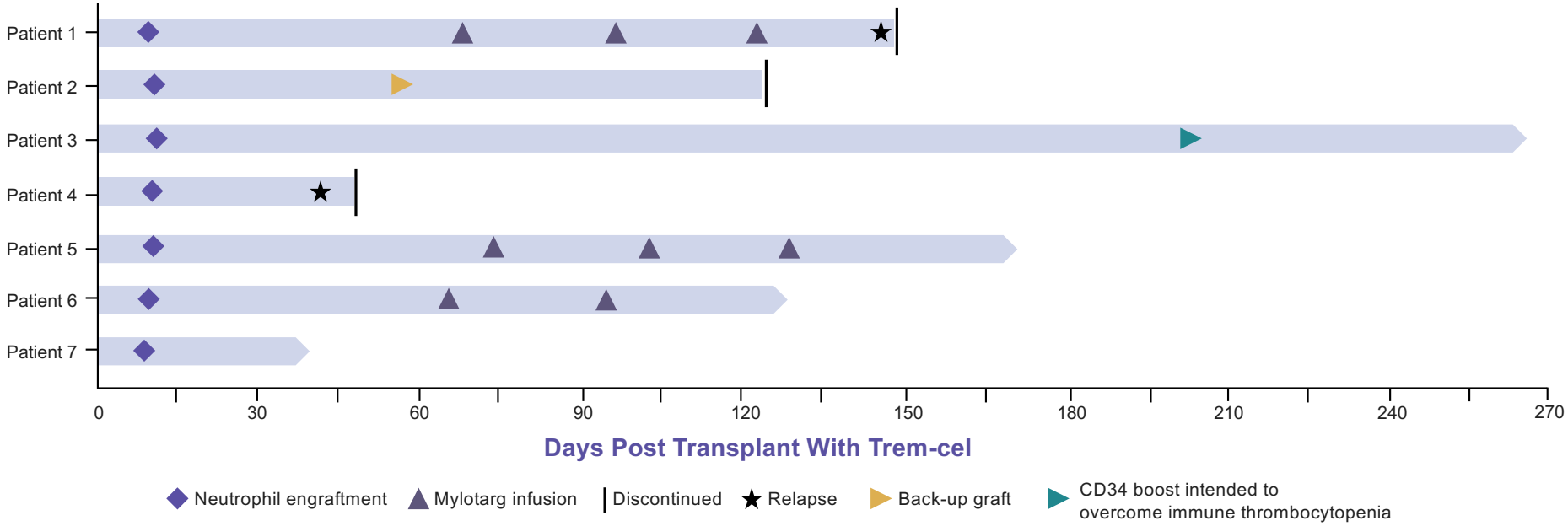
Pt	Age/ Sex	Disease and Genetics	Weight	Donor, Dose, *CD33* gene-editing efficiency
1	64/F	AML-MRC Highly complex cytogenetics; CR2; TP53 mutation MRD: 1.8%	69.9 kg	10/10 HLA MUD 7.6 × 10^6 CD34 cells/kg, 88% *CD33* gene editing
2	32/M	AML after myeloid sarcoma resected from abdomen Inv 16 and +22, t(3;3)	120.7 kg	10/10 HLA MUD 3.2 × 10^6 CD34 cells/kg, 87% *CD33* gene editing
3	55/F	AML-MRC DNMT3A, IDH2 and SMC1A mutations	114.1 kg	10/10 HLA MUD 2.6 × 10^6 CD34 cells/kg, 80% *CD33* gene editing
4	68/M	AML-MRC Complex cytogenetics; active disease; NRAS, ZRSR2, TET2 mutations MRD: 16%	72.4 kg	10/10 HLA MSD 5.8 × 10^6 CD34 cells/kg, 89% *CD33* gene editing
5	66/M	Secondary AML KIT D816V, CBL, SRSF2, RUNX1/2, BCORL1 mutations	102.1 kg	10/10 HLA MUD 4.6 × 10^6 CD34 cells/kg, 85% *CD33* gene editing
6	63/F	AML-MRC Highly complex cytogenetics; TP53, NRAS, WT1 mutations	66.2 kg	10/10 HLA MUD 5.7 × 10^6 CD34 cells/kg, 91% *CD33* gene editing
7	67/M	AML with recurrent abnormalities CR2; NPM1, TET2, EZH2, SETBP1, PIGA mutations	72.8 kg	10/10 HLA MUD 9.4 × 10^6 CD34 cells/kg, 87% *CD33* gene editing

MRC = myelodysplasia-related changes, MRD = Measurable Residual Disease, MUD = Matched Unrelated Donor, MSD = Matched Sibling Donor

All patients received myeloablative conditioning with busulfan/melphalan/fludarabine/rabbit anti-thymocyte globulin (ATG), with exception for patient #3, who received equine ATG.

Data Cutoff: 31 Oct 2023. Presented data from EDC and site/PI communication; pending full source verification

Patient Clinical Timelines (Patients 1-7)



Patients Ineligible for Mylotarg:

Patient 2

Secondary graft failure in context of prior sepsis, TMP-SMZ/possible DRESS and persistent hKU1 coronavirus infection. Graft failure resolved after back-up graft given.

Patient 3

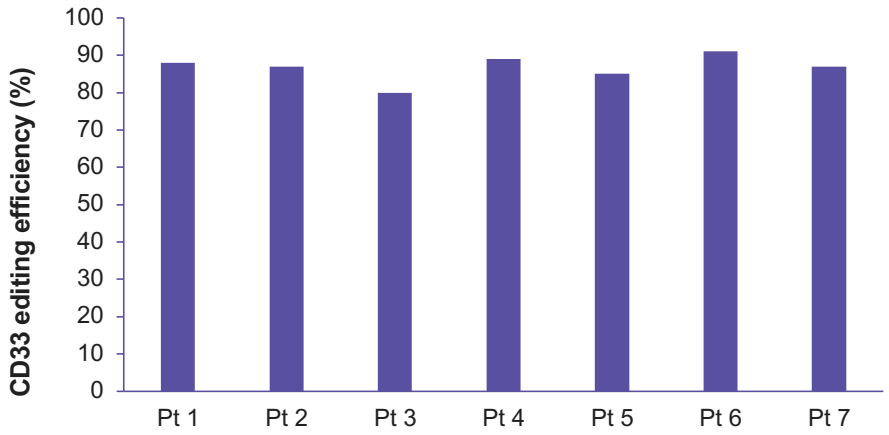
Immune thrombocytopenia. Resolving after treatment with IVIg, steroids, rituximab, CD34 boost.

Patient 4

CNS and systemic relapse prior to Mylotarg dosing.

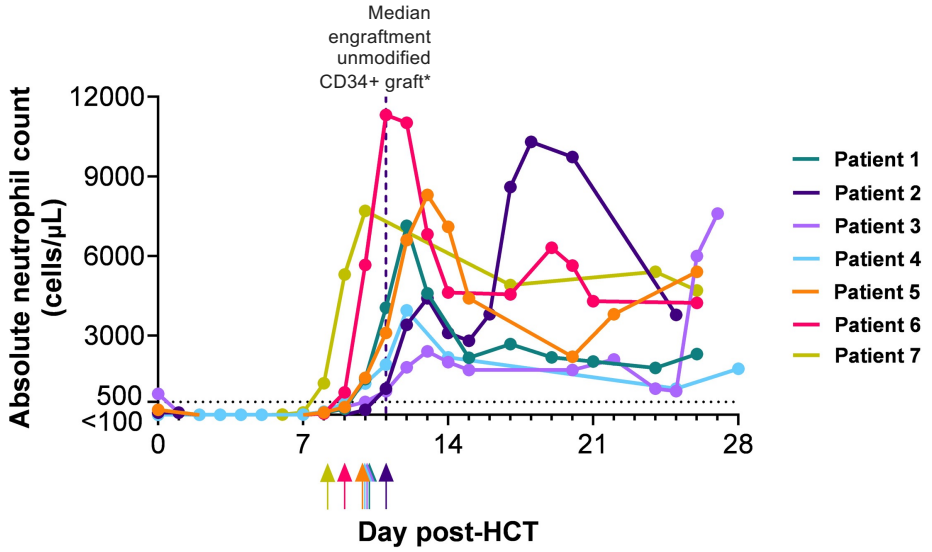
Proof of Concept: Successful Engraftment of CD33-Deleted HSCs

Highly Efficient Removal of CD33 from Donor HSCs



	Pt 1	Pt 2	Pt 3	Pt 4	Pt 5	Pt 6	Pt 7
Donor Chimerism (Day 28)	100%	100%	100%	100%	100%	100%	100%

Timely Post-transplant Neutrophil Engraftment

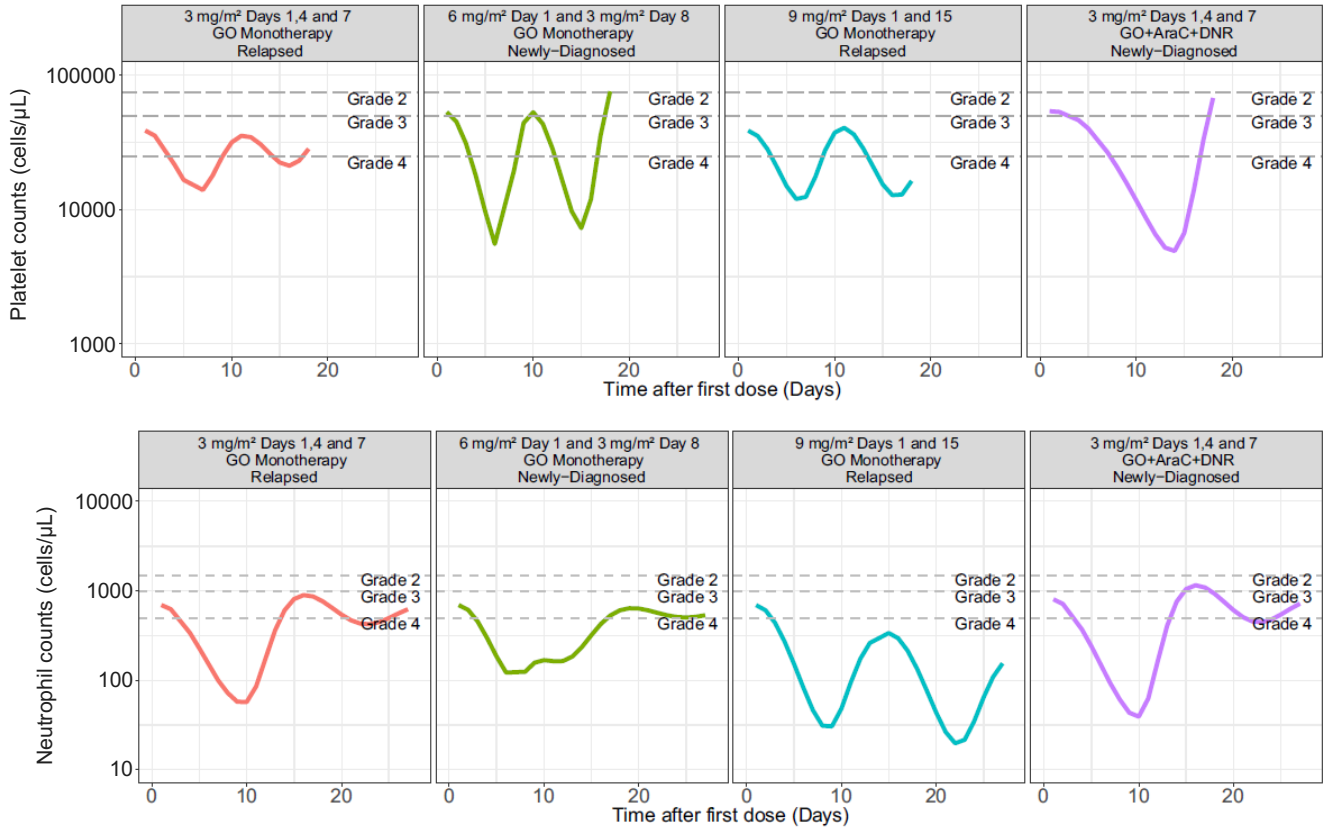


Arrows indicated day of individual patient neutrophil engraftment

Neutrophil engraftment = 3 days ≥ 500 cells/µL

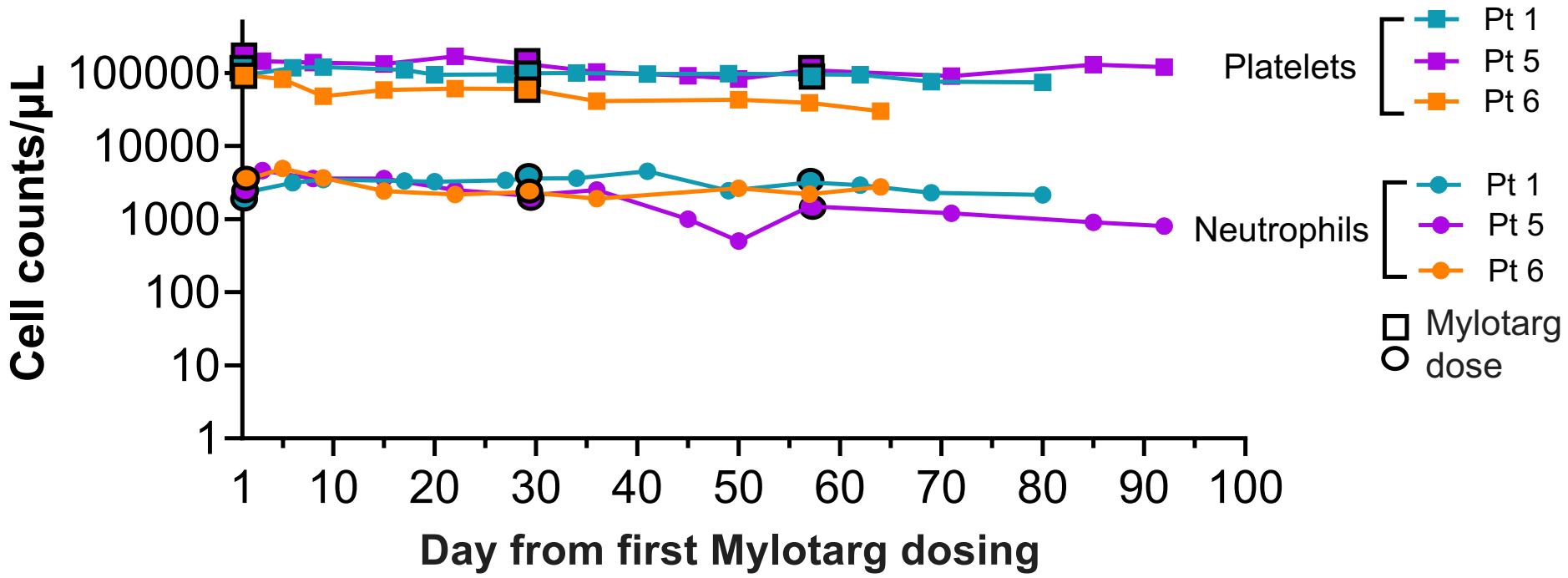
*Luznik L. et al. J Clin Oncol 2022;40(4):356–368

Mylotarg Causes Profound Cytopenia Across Various Regimens



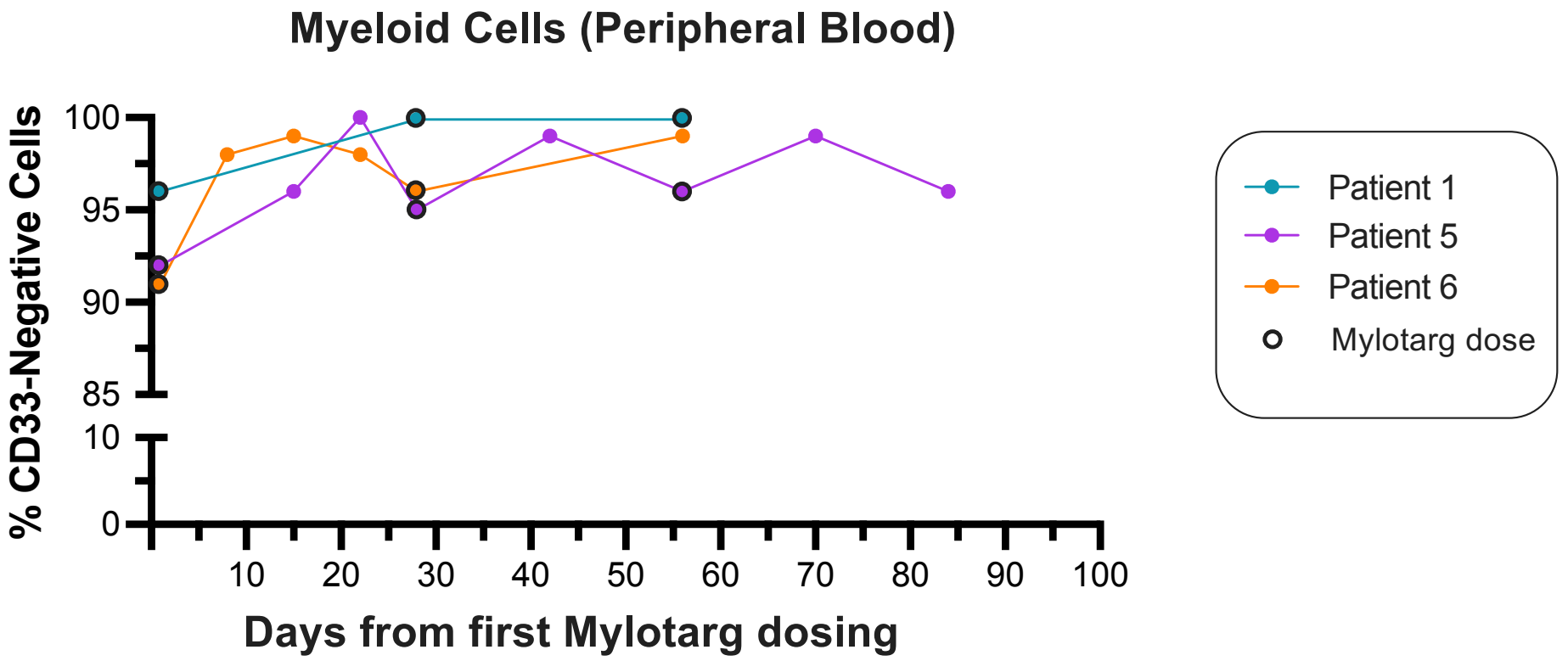
Fostvedt et al. Clin Pharm Thera 2019;106(5):1006-1017

Evidence of Protective Effect from Mylotarg at 0.5 mg/m^2



Mylotarg C1 Start: Pt 1 D+68; Pt 5 D+74; Pt 6 D+66 post-HCT

Enrichment of CD33-negative Cells following Mylotarg

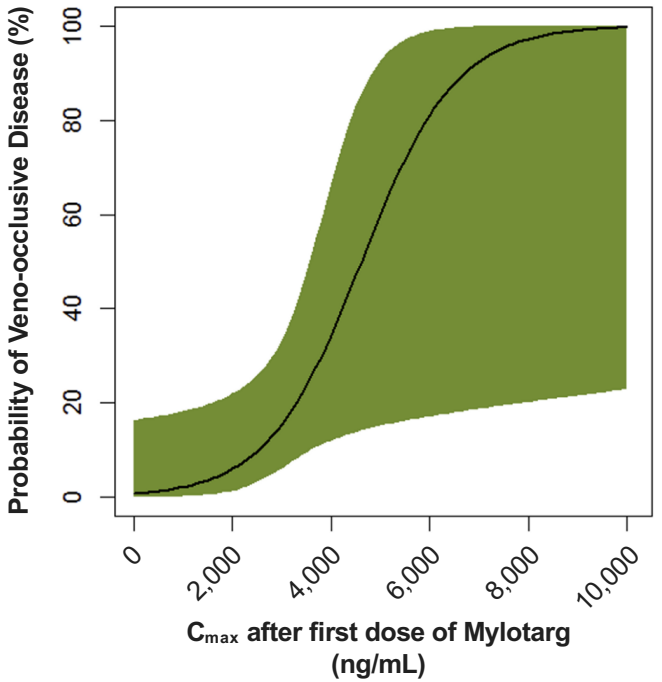


Patients 1, 5, 6: PK after 1st Dose of Maintenance Mylotarg

Pharmacokinetics

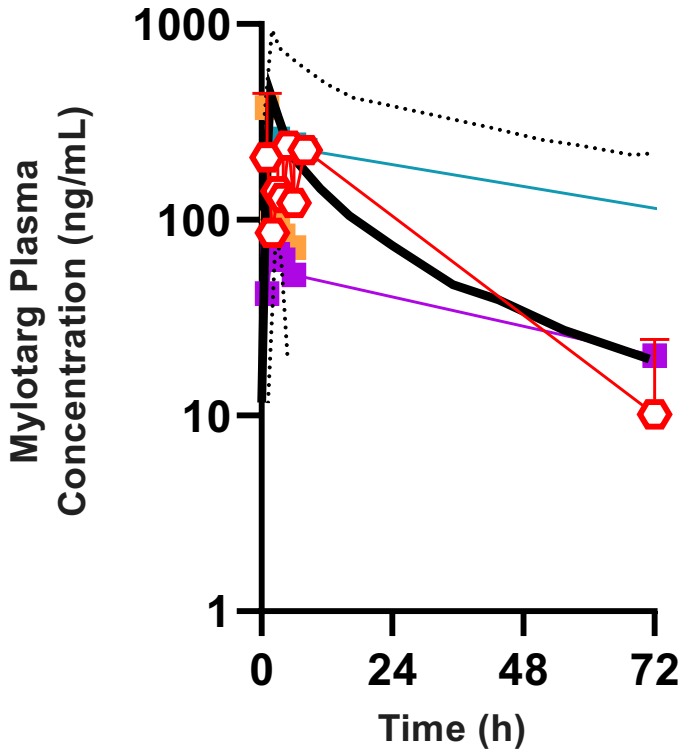
	Patient 1 1st Dose	Patient 5 1st Dose	Patient 6 1st Dose	Relapsed/Refractory AML Population (Mylotarg Phase 1 Study 0903A1-101-US)[1]					
Parameter	**0.5 mg/m²**	**0.5 mg/m²**	**0.5 mg/m²**	**0.25 mg/m²**	**0.5 mg/m²**	**1 mg/m²**	**2 mg/m²**	**4 mg/m²**	**5 mg/m²**
C_{max} (ng/mL)	**259**	**75**	**374**	15	28	**50**	**411**	611	1,325
AUC_{inf} (h*ng/mL)	**26,950**	**4,038**	**1,682**	82	468	**943**	**11,110**	**10,970**	**29,980**

Relationship Between Mylotarg C_{max} and Veno-occlusive Disease in Prior Transplant[1]



[1]Mylotarg ODAC 2017

Mylotarg at 0.5 mg/m^2 Equivalent to ~3 mg/m^2 in the Context of CD33-negative Hematopoiesis



R/R AML
- Mean 3.0 mg/m^2
- 2.5% CI
- 97.5% CI

VBP101
- Mean 0.5 mg/m^2 (SD)
- Patient 1
- Patient 5
- Patient 6

Mean (SD) Exposure Parameters:

C_{max} (ng/mL): 235.9 (+/- 151)

AUC_{last} (ng*h/mL): 8857 (+/- 12355)

Data from 3.0 mg/m^2 mean (+/- ci) data digitized from simulations presented in Hibma et al, 2019

Safety Events Reported as Possibly Related to Either Trem-cel or Mylotarg (AE ≥ Grade 3 or any Grade SAE)

Adverse Event	Max Grade	Related to Trem-cel (# of events)	Related to Mylotarg (# of events)	SAE (# of events)
Anemia	3	1	—	—
Neutropenia	3	1	—	—
Thrombocytopenia	3	2	—	—
Graft Failure	4	1	—	1
Platelet count decreased	3	—	1	—
Platelet count decreased, worsening	3	1	1	—
Worsening maculopapular rash of whole body	2	1	—	1

For Mylotarg dosing:

- No dose-limiting toxicity criteria met
- No increase in liver function tests above upper limit of normal
- No observed sinusoidal obstruction syndrome / veno-occlusive disease

Conclusions

All patients achieved primary neutrophil engraftment following trem-cel within 8-11 days.

No unanticipated adverse events compared to unedited CD34 positive transplants.

No evidence of acute on-target toxicity from Mylotarg (n=3)

Confidence towards dose escalation (1.0 mg/m^2) and offering multiple therapeutic options upon relapse including induction course Mylotarg or VCAR33^{ALLO}

Closing Remarks

Robert Ang, MBBS, President & CEO

A New Way of Generating CAR-T Therapy

Traditional Approaches

Autologous cells
(derived from patient)

Exhausted, depleted T cells

High manufacturing failure

Allogeneic cells
(off-the-shelf)

Poor expansion and persistence

Poorer clinical durability

Vor Bio Approach

Transplant Donor Cells

T cells exactly matched to patient's new immune system, more likely to persist

Stem-like CAR-T cells more likely to expand and less prone to exhaustion

VCAR33^{AUTO} Shows Signs of Activity; VCAR33^{ALLO} Potentially More Active

VCAR33^{AUTO} (NCI CD33CART)

- Autologous starting material
- 6-site IST
- Young adults and children (median 16 y, range 1-35)
- Academic manufacturing process
- Accepted for oral presentation at ASH
  - N=24 enrolled, 19 infused
  - Manageable tox (n=4 with CRS ≥ Grade 3)

Dose (CAR$^+$ cells/kg)	Total	3 x 10^5	1 x 10^6	3 x 10^6	1 x 10^7
# infused	19	3	3	7	6 (resp assess in 5)
# with CR, (%)	2 (11%)	0 (0%)	0 (0%)	0 (0%)	2 (40%)

Data from ASH 2023 Abstract: https://ash.confex.com/ash/2023/webprogram/Paper179667.html

VCAR33^{ALLO}

- Transplant donor starting material
- IND cleared in June, first site opened
- Targeting ~12 sites
- Streamlined manufacturing process with objective of stem like cell phenotype
- Allows trem-cel patients to enroll
- Starting dose 1 x 10^6 CAR$^+$ cells/kg

Significant Clinical Progress and Upcoming Milestones

	Progress to Date	Upcoming Milestones
Trem-cel	Trem-cel can be reliably manufactured with efficient CD33 deletion (87% average) CD33 appears biologically dispensable in regard to engraftment (7/7) Trem-cel provides hematologic protection from acute Mylotarg toxicity (3/3)	Mylotarg dosing cleared to escalate to next dose level of 1.0 mg/m^2 Multiple therapeutic options enabled for patients who relapse following trem-cel transplant: • Induction-course Mylotarg • VCAR33^{ALLO}
VCAR33	Potentially superior transplant donor cell source IND cleared; 1st site active Trem-cel patients are eligible to enroll VCAR33^{AUTO} (CD33CART) showed activity at highest dose level and manageable safety	Preliminary VCAR33^{ALLO} safety and efficacy

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Q&A

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