Data from Cohort C of the Phase 1 ALLOHA™ Study

June 2026

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TSCAN THERAPEUTICS

TScan is a fully integrated, next-generation TCR-T cell therapy company

Clinical

HEME MALIGNANCY PROGRAM

- Designed to treat residual disease and prevent relapse in patients undergoing bone marrow transplant
- TSC-101 continues to be well-tolerated
- **Durable long-term data for TSC-101: 100% (2/2) of patients 3-years post-HCT** and **71% (5/7) of patients 2-years post-HCT** show **detectable TSC-101 cells** and **no evidence of disease** vs. 0% (0/3) and 43% (3/7), respectively, on the control arm.[(1)]
- **Treated 14 patients** using commercial-ready manufacturing process in Cohort C of ALLOHA trial with promising initial data that supports expected **launch of pivotal study** in Q2 2026
- **INDs** for **TSC-102-A01** and **TSC-102-A03 cleared** providing path to double addressable market. Phase 1 study expected to begin in **Q4 2026**

Preclinical

SOLID TUMOR PROGRAM

- TCR-Ts for PRAME and MAGE-A4 in preclinical development using an ***in vivo*-engineering** platform
- Recent FDA INTERACT feedback established a roadmap for filing INDs by mid-2027

Discovery

AUTOIMMUNITY PROGRAM

- Targets identified for systemic sclerosis, ulcerative colitis, ankylosing spondylitis, and birdshot uveitis[(2)]
- Novel targets leveraged to generate first-in-class T-cell depleting therapies
- Lead program in preclinical development for AS & spondyloarthropathies

$128.1M as of March 31, 2026 funds operations into H2 2027

TSCAN THERAPEUTICS

(1) Data as of June 8. 2026; (2) Weinheimer et al, and Pryor et al, presented at ACR Convergence 2025, abstracts 0888, 0997; IND: investigational new drug; AS = ankylosing spondylitis

Agenda

Overview of Heme Program and Manufacturing Update
Gavin MacBeath, Ph.D.

Updated Data from Cohort C of Phase 1 ALLOHA™ Trial
Gavin MacBeath, Ph.D., Ran Reshef, M.D., M.Sc.

Phase 3 Trial Design (ALLOHA-2)
Chrystal Louis, M.D., M.P.H.

Market Opportunity for TSC-101 and Follow-on Product Candidates
Gavin MacBeath, Ph.D., Ran Reshef, M.D., M.Sc.

Q&A Session
Gavin MacBeath, Dr. Reshef, Chrystal Louis, and Shrikanta Chattopadhyay, M.D.

TSCAN THERAPEUTICS

Heme Malignancies:

Targeting residual disease to prevent relapse in patients undergoing allogeneic HCT

TSCAN THERAPEUTICS

TScan is working to treat residual disease and prevent relapse in heme malignancies

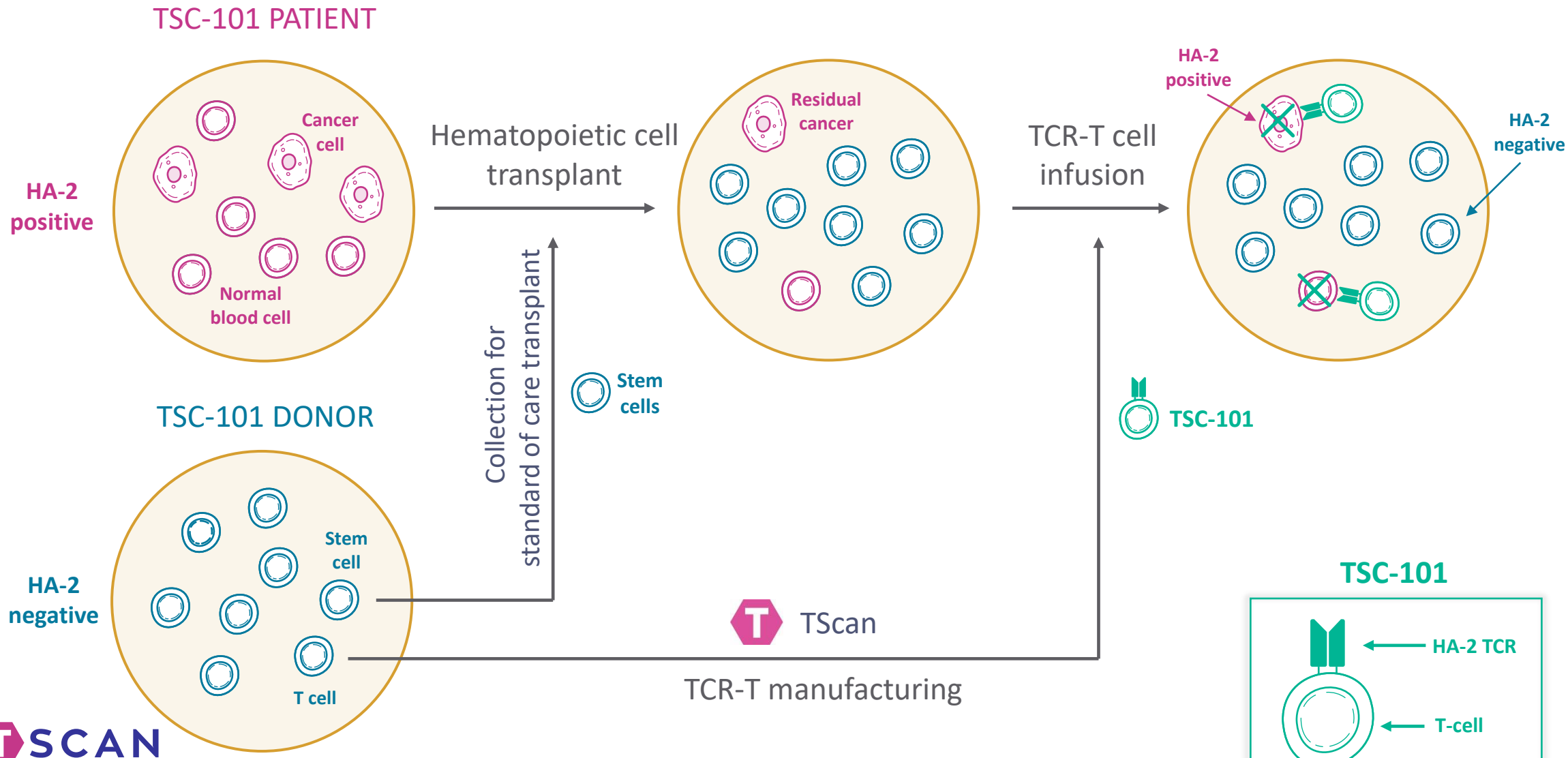
Current Standard of Care	Allogeneic hematopoietic cell transplant (Allo-HCT) is the only potential cure for patients with AML and MDS
Unmet Medical Need	38-44% of patients relapse within two years following Allo-HCT with reduced intensity conditioning (RIC)*
TScan Approach	TCR-T cell therapy that targets antigens on patient cells, but not donor cells, to prevent relapse after transplant

TSC-101 is a TCR-T cell therapy designed to **eliminate residual cancer** and **prevent relapse** following Allo-HCT in HLA-A*02:01-positive patients

TSCAN THERAPEUTICS

* CIBMTR analysis of AML, ALL, MDS allogeneic transplants with reduced intensity conditioning (RIC) between 2017-2019 with 2-year follow-up

TSC-101 is a TCR-T cell therapy designed to eliminate residual cancer and prevent relapse following Allo-HCT

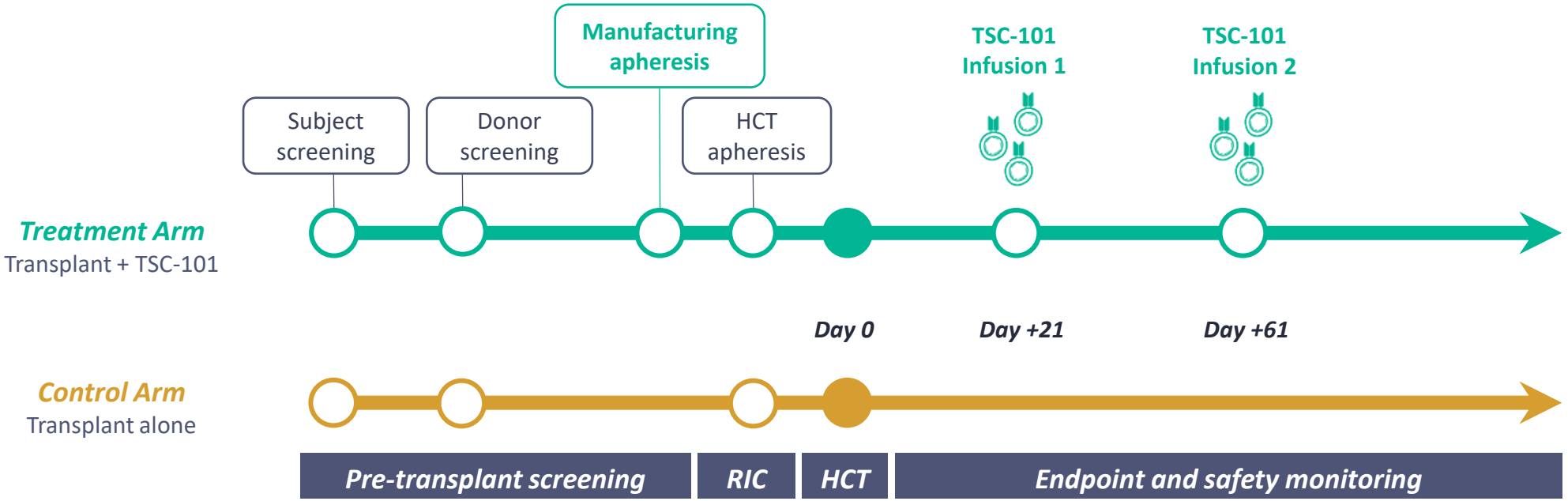


Heme Program: TSC-101

Recap of ASH data

TSCAN THERAPEUTICS

ALLOHA™, a multi-arm Phase 1 trial for TSC-101 in subjects with AML, ALL, and MDS (NCT05473910)



Key eligibility criteria

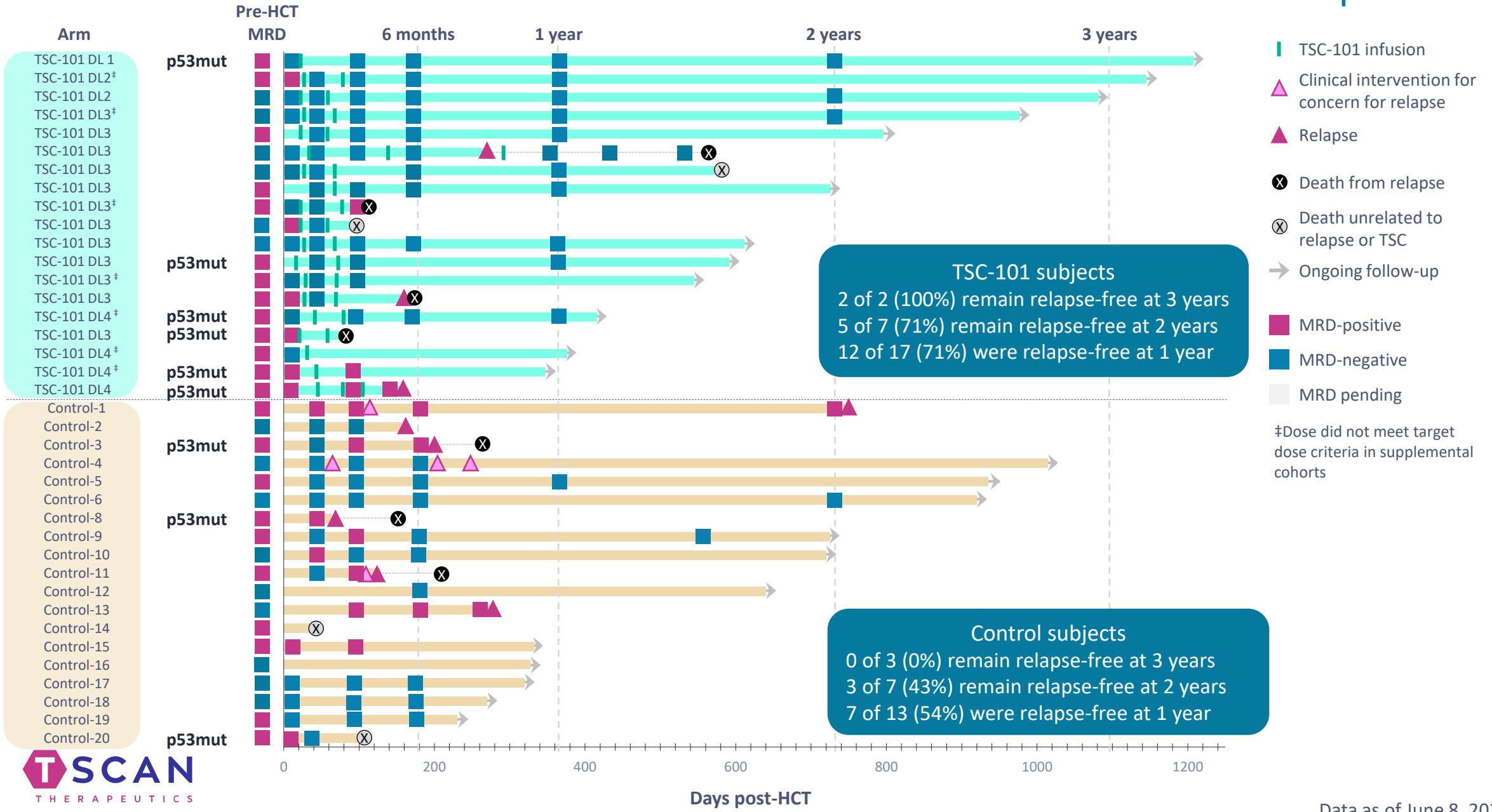
- Age ≥18 years
- Undergoing first allo-HCT for ALL, AML, MDS
- Subject positive for HA-2 with a haploidentical HA-2 negative donor
- Eligible for RIC-HCT followed by PTCy for GvHD prophylaxis

Key endpoints

- Safety: Dose limiting toxicities, adverse events
- Efficacy
- Exploratory endpoints: Donor chimerism, minimal residual disease

ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; MDS, myelodysplastic syndromes; GvHD, graft vs host disease; RIC-HCT, reduced intensity conditioning hematopoietic cell transplantation

Patients treated with TSC-101 have more durable remissions than control patients



TSCAN THERAPEUTICS

Data as of June 8, 2026

ALLOHA™ Phase 1 data support launch of pivotal trial in Q2 2026

Attractive safety profile

Infusions with TSC-101 were **well-tolerated with no DLTs** and adverse events following HCT + TSC-101 were consistent with HCT alone*

Meaningful long-term benefit

More TSC-101-treated patients remain relapse-free >1-year post-HCT vs control arm#

- **100% (2/2)** vs 0% (0/3) on control arm **at 3-years**
- **71% (5/7)** vs 43% (3/7) on control arm **at 2-years**
- **71% (12/17)** vs 54% (7/13) on control arm **at 1-year**

Long-term persistence

TSC-101 identified in all treated patients, including those **3-years post HCT**

Reached agreement with FDA on pivotal trial design

*Al-Malki et al, 2025 ASH Annual Meeting; DLT, dose limiting toxicity; RFS: relapse-free survival; OS: overall survival; HCT, hematopoietic cell transplantation; #Data as of June 8, 2026

Heme Program Update:

Patients infused with TSC-101 manufactured with commercial ready process (Cohort C)

TSCAN THERAPEUTICS

Optimized manufacturing process results in robust production with shorter time and lower COGs

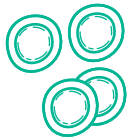
Phase 1 Process: 17 Days

DAY 1
Isolate PBMCs

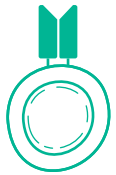
Electro-porate

DAY 2
Activate T-cells

DAY 6
Expand T-cells

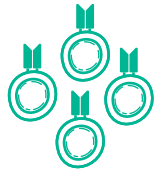


DAY 9
Enrich TCR-T cells



Magnetic bead selection

DAY 14
Expand TCR-T cells



DAY 17
Harvest & Freeze

Inefficient step: >90% loss of TCR-T cells

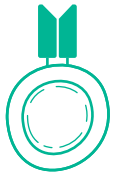
Commercial-ready Process: 12 Days

DAY 1
Isolate PBMCs

Electro-porate

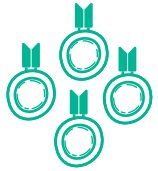
DAY 2
Activate T-cells

DAY 6
Expand & Enrich TCR-T cells



Drug selection

DAY 9
Expand TCR-T cells



DAY 12
Harvest & Freeze

Highly efficient step: minimal loss of TCR-T cells

TSCAN THERAPEUTICS

Patients are generally well balanced across arms, although Cohort C included a higher percentage of patients with MRD-positive disease prior to transplant

		TSC-101 Cohort A	TSC-101 Cohort C	Control
Evaluable Subjects*		19	14	19
Age, Median years (Range)		65 (52-74)	68 (28-79)	66 (23-77)
Sex, Male		13 (68%)	9 (64%)	9 (47%)
Underlying Disease	ALL	2 (11%)	1 (7%)	1 (5%)
	AML	13 (68%)	8 (57%)	10 (53%)
	MDS	4 (21%)	5 (36%)	8 (42%)
TP53 mutated		6 (32%)	3 (21%)	4 (21%)
MRD-positive pre-HCT		12 (63%)	9 of 12 (75%)	10 (53%)
Donor type	Haplo	19 (100%)	9 (64%)	18 (95%)
	MMUD	--	5 (36%)	1 (5%)

Mixed chimerism post-HCT (~D21)	11 of 18 (61%)	12 of 14 (86%)	13 of 17 (76%)

*Subjects on the treatment arm who received ≥1 infusion of TSC-101 and on the control arm who reached Day 21 post-HCT; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; MDS, myelodysplastic syndromes; Pre-HCT MRD, pre-hematopoietic cell transplantation minimal residual disease; Haplo, haploidentical donor; MMUD, mismatched unrelated donor

Data as of May 20, 2026

TSC-101 continues to be well-tolerated in Cohort C

	TSC-101 Cohort C n=14	Control* n=19
Treatment-emergent aGvHD (MAGIC)	2 (14%)	12 (63%)
Grade I	1 (7%)	6 (32%)
Grade II	1 (7%)	5 (26%)
Grade III	0	1 (5%)
Any Treatment-emergent cGvHD (NIH)	1 (7%)	2 (11%)
Mild	1 (7%)	1 (5%)
Moderate	0	1 (5%)
Any CRS	8 (57%)	7 (37%)
Grade 1 - 2	8 (57%)	6 (32%)
Grade 3 - 4	0	1 (5%)
Treatment-emergent CRS	1 (7%)	0
Grade 1 - 2	1 (7%)	0
Grade 3 - 4	0	0
Any ICANS	0	0
Treatment-emergent ICANS	0	0

- Safety has been consistent with Cohort A
- One case of acute respiratory distress syndrome (ARDS) with TSC-101
  - G4 ARDS 13 days after infusion #1 in patient with G4 kidney injury and HHV6 encephalitis after transplant. Case reviewed by SRC and no changes recommended
- Two cases of acute graft vs host disease (aGvHD)
  - 1 Grade I and 1 Grade II events
- One case of CRS reported after TSC-101 infusions
  - Grade 1 event and resolved

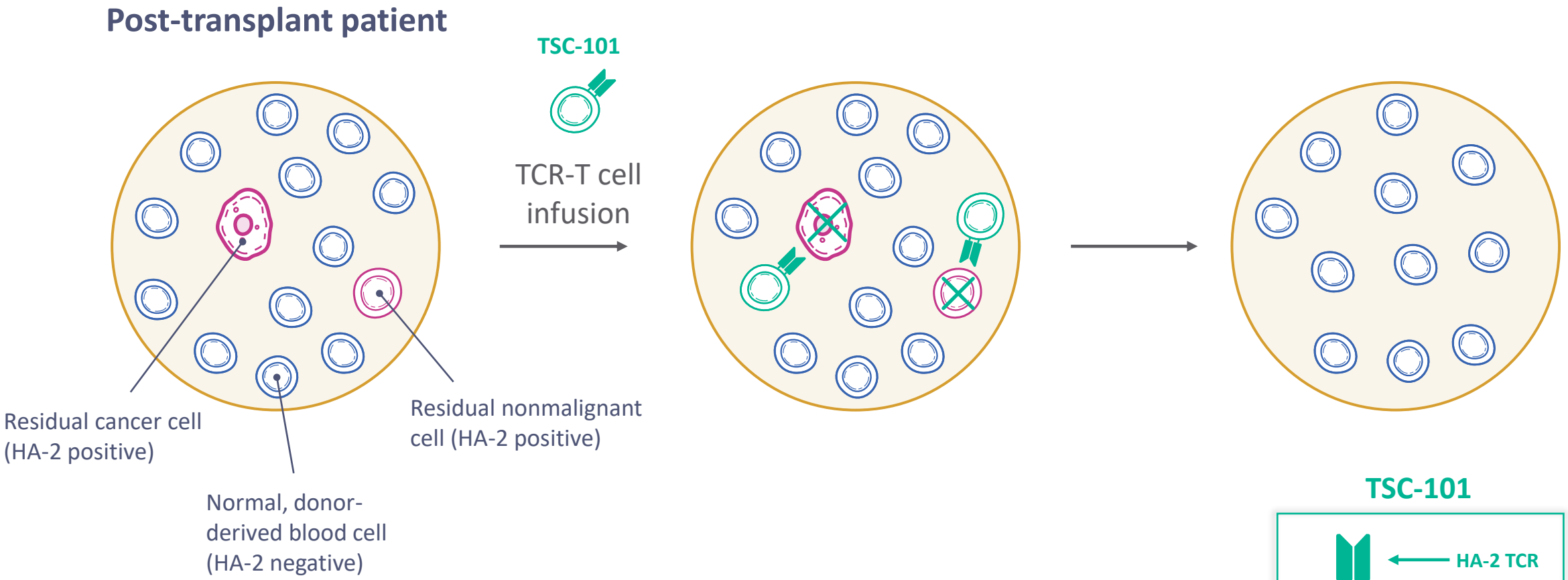
TSCAN THERAPEUTICS

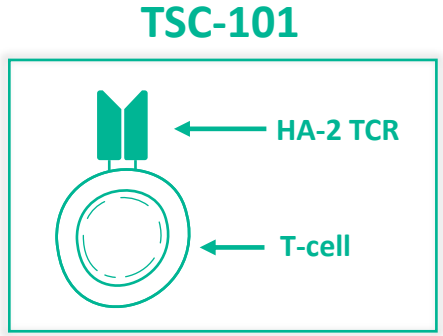
* Control-arm patients enrolled concurrently with Cohort A and therefore with longer duration on study vs Cohort C

GvHD, graft-versus-host disease; ICANS, Immune effector cell associated neurotoxicity syndrome; CRS, Cytokine release syndrome

Data as of May 20, 2026

TSC-101 is designed to eliminate residual cancer and prevent relapse following Allo-HCT





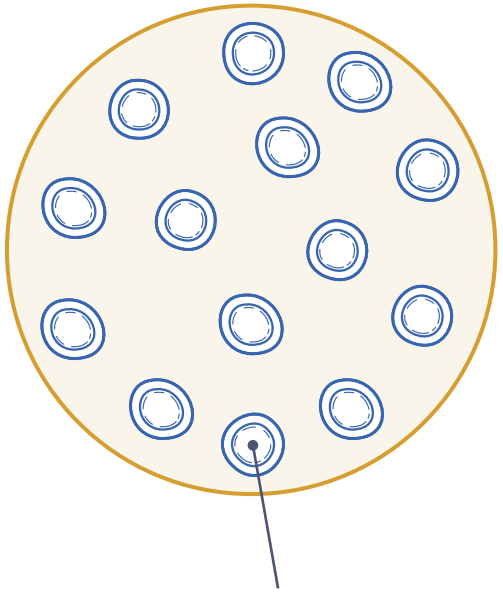
TSCAN THERAPEUTICS

Donor chimerism serves as an early surrogate of efficacy

Post-transplant patient

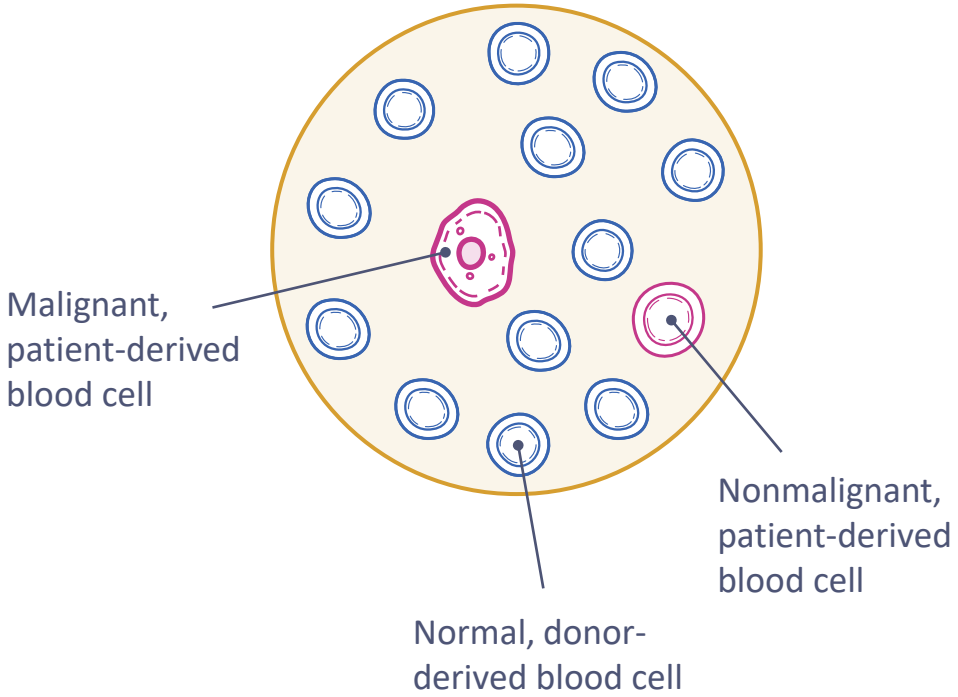
Complete donor chimerism

(low risk of relapse[1,2])



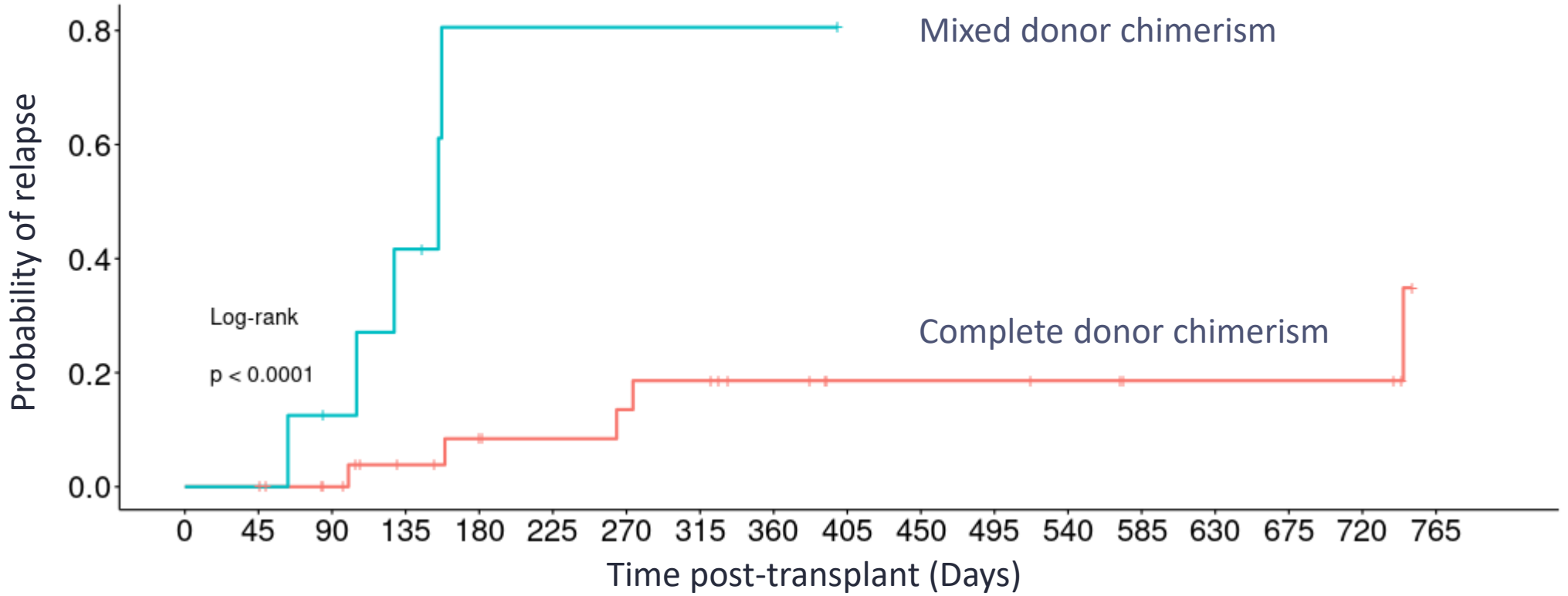
Mixed donor chimerism

(increased risk of relapse[1,2])



1. Lindhal, Bone Marrow Transpl, 2022
2. Ciurea, Al Malki, Blood Rev, 2023

Patients with complete donor chimerism using NGS chimerism assay at two months post-transplant have a low probability of relapse

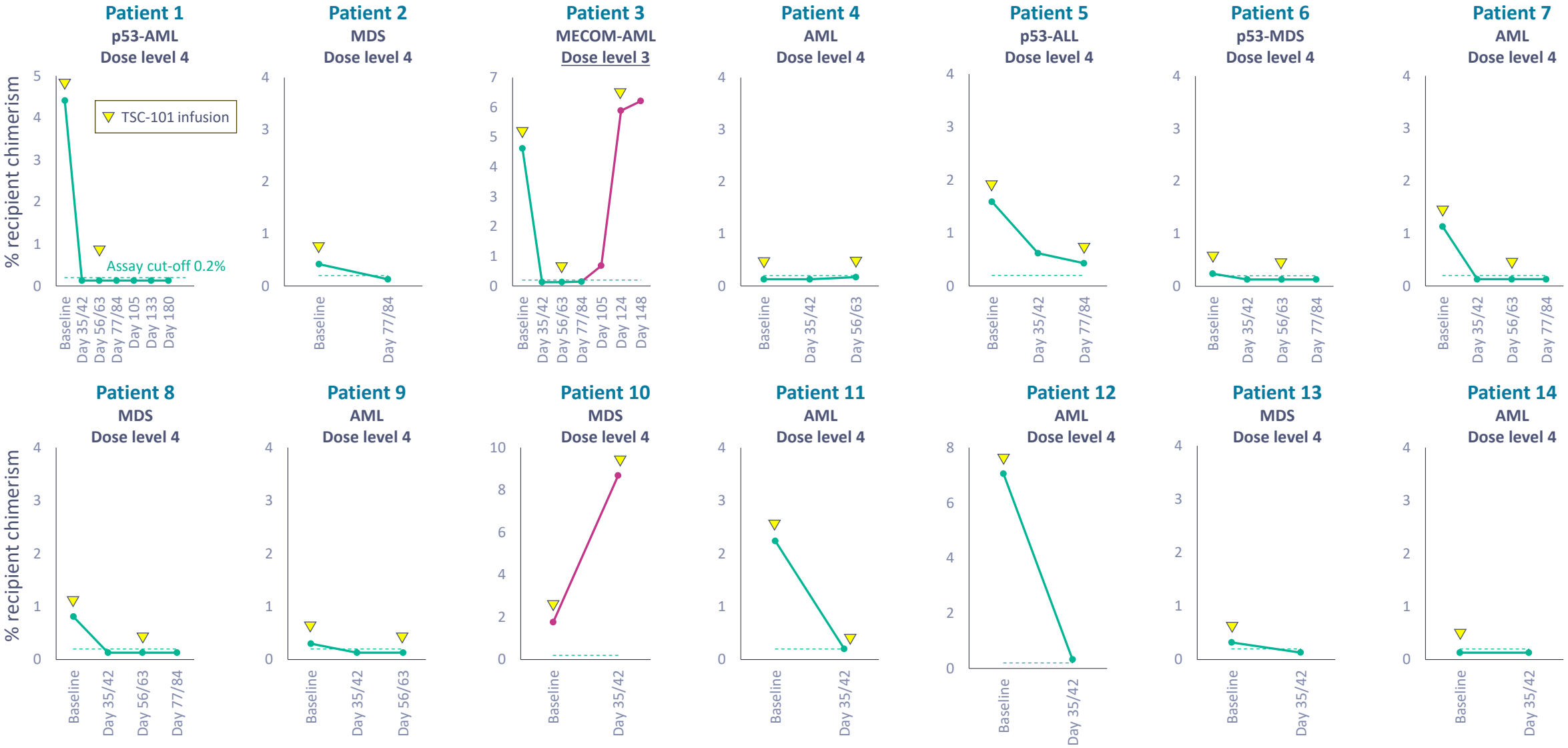


Chimerism status of initial ALLOHA patients at 2 months post-transplant predicts probability of relapse (HR 10.2)

NGS, investigational next-generation sequencing assay (Alloheme)

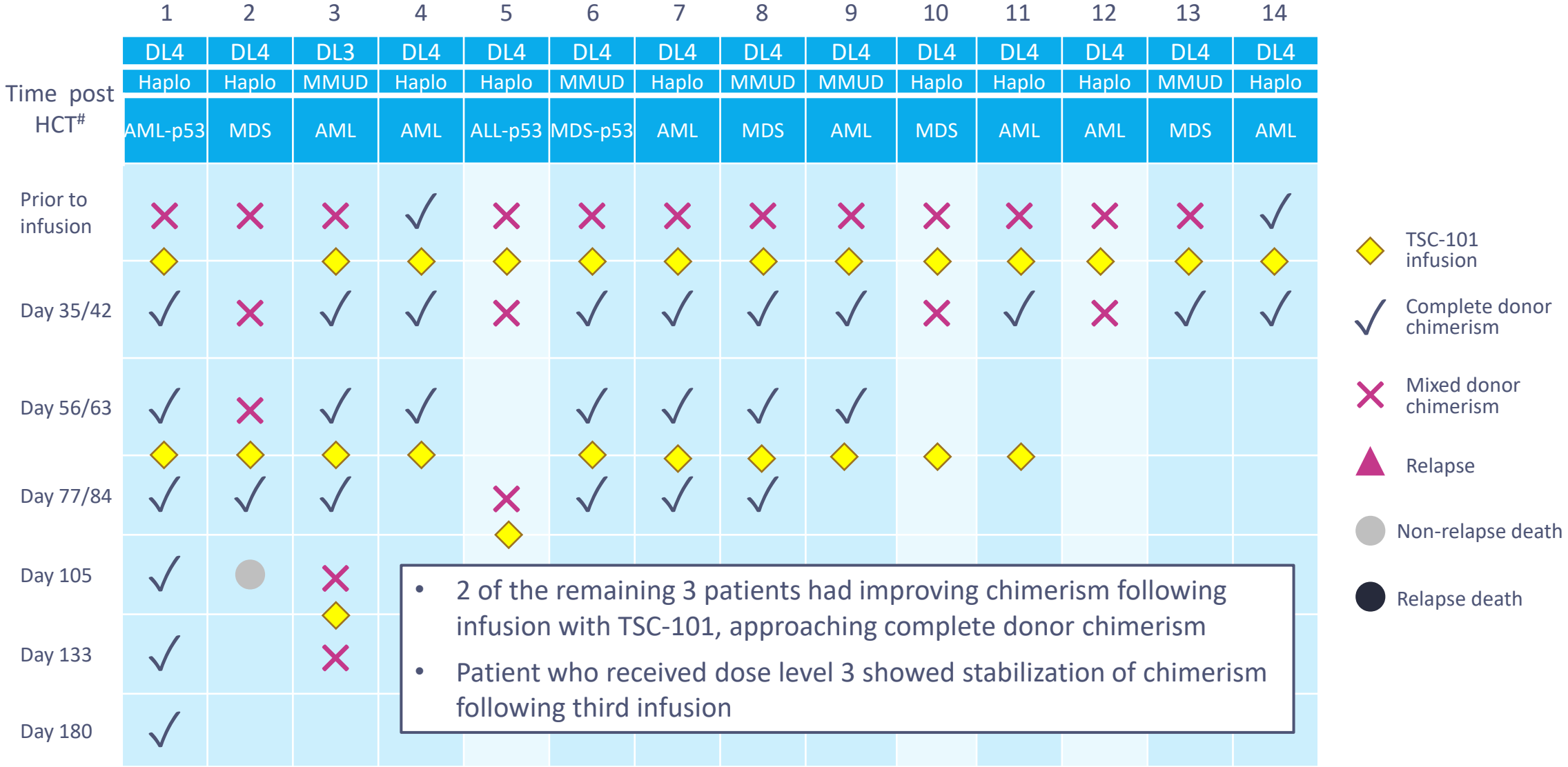
Data on file; Data as of May 19, 2026

All but one patient in Cohort C (93%) responded to TSC-101 with decreasing recipient chimerism



Donor chimerism results using investigational next-generation sequencing assay (Alloheme) with data cut-off of 0.2% at indicated times post-transplant (# ± 3 days)

11 of 14 patients achieved complete donor chimerism within ~3 weeks of receiving first infusion of TSC-101



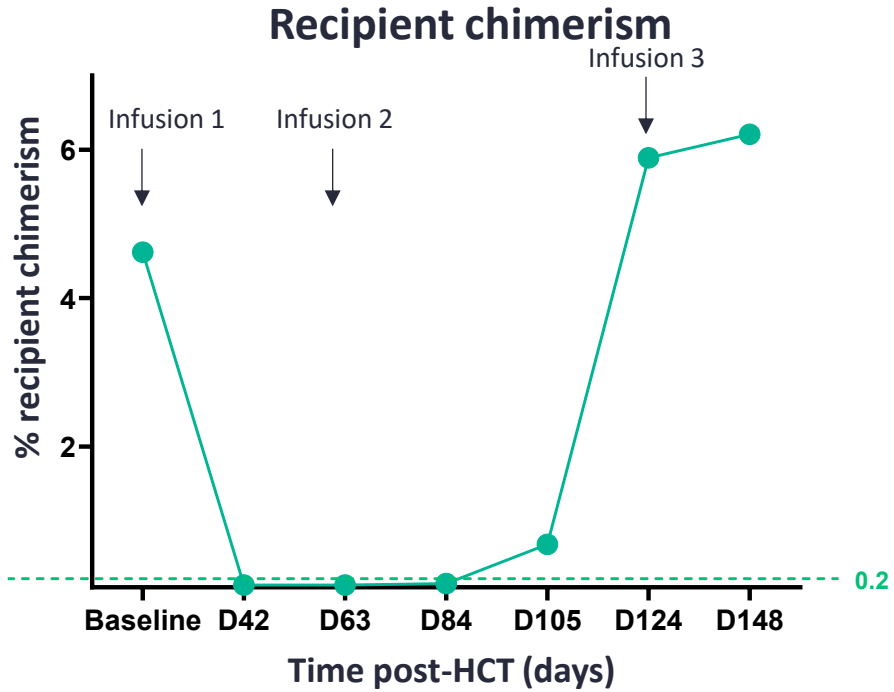
Donor chimerism results using investigational NGS assay (Alloheme) with data cut-off of 0.2% at indicated times post-HCT (#± 3 days); ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; MDS, myelodysplastic syndromes; Haplo, haploidentical donor; MMUD, mismatched unrelated donor

Data as of June 8, 2026

Patient with incomplete chimerism at day 105 showed stabilization following third infusion

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	DL4	DL4	DL3	DL4	DL4	DL4	DL4	DL4	DL4	DL4	DL4	DL4	DL4	DL4
	Haplo	Haplo	MMUD	Haplo	Haplo	MMUD	Haplo	MMUD	MMUD	Haplo	Haplo	Haplo	MMUD	Haplo
Time post HCT#	AML-p53	MDS	AML	AML	ALL-p53	MDS-p53	AML	MDS	AML	MDS	AML	AML	MDS	AML
Prior to infusion	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓
	◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Day 35/42	✓	✗	✓	✓	✗	✓	✓	✓	✓	✗	✓	✗	✓	✓
Day 56/63	✓	✗	✓	✓		✓	✓	✓	✓					
	◆	◆	◆	◆		◆	◆	◆	◆	◆	◆			
Day 77/84	✓	✓	✓		✗	✓	✓	✓						
					◆									
Day 105	✓	●	✗											
			◆											
Day 133	✓		✗											
Day 180	✓													

- MECOM-rearranged AML, a rare but aggressive subset (~2% of AML, <10% survival[1])
- MRD-positive prior to transplant and MRD-positive 3 weeks post-HCT (before first infusion)



- Patient received dose level 3 and initially achieved complete donor chimerism
- Following third infusion, increasing chimerism stabilized but did not convert to complete donor chimerism

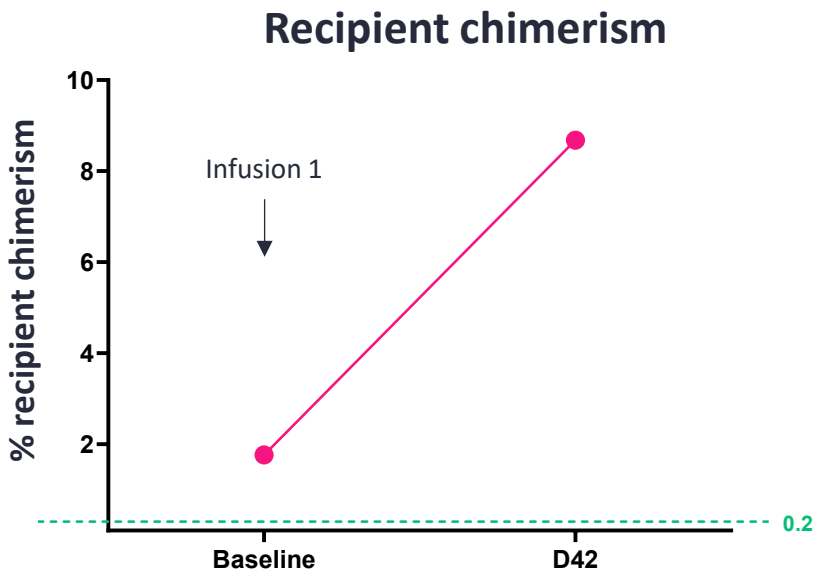
Donor chimerism results using investigational NGS assay (Alloheme) with data cut-off of 0.2% at indicated times post-HCT (# ± 3 days); ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; MDS, myelodysplastic syndromes; Haplo, haploidentical donor; MMUD, mismatched unrelated donor; Post-HCT, post-hematopoietic cell transplant; NGS, next-generation sequencing;

[1]Joshi U, Shallis RM. Hematol Rep. 2025 Oct 31;17(6):59. doi: 10.3390/hematolrep17060059

Data as of June 8, 2026

Patient with increasing recipient chimerism shows no morphologic evidence of disease by bone marrow biopsy

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	DL4	DL4	DL3	DL4	DL4	DL4	DL4	DL4	DL4	DL4	DL4	DL4	DL4	DL4
	Haplo	Haplo	MMUD	Haplo	Haplo	MMUD	Haplo	MMUD	MMUD	Haplo	Haplo	Haplo	MMUD	Haplo
Time post HCT#	AML-p53	MDS	AML	AML	ALL-p53	MDS-p53	AML	MDS	AML	MDS	AML	AML	MDS	AML
Prior to infusion	✗ ◆	✗	✗ ◆	✓ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✓ ◆
Day 35/42	✓	✗	✓	✓	✗	✓	✓	✓	✓	✗	✓	✗	✓	✓
Day 56/63	✓ ◆	✗ ◆	✓ ◆	✓ ◆		✓ ◆	✓ ◆	✓ ◆	✓ ◆	◆	◆			
Day 77/84	✓	✓	✓		✗ ◆	✓	✓	✓						
Day 105	✓	●	✗ ◆											
Day 133	✓		✗											
Day 180	✓													



- Bone marrow biopsy at day 68 showed no morphologic or cytogenetic evidence of disease; NGS pending

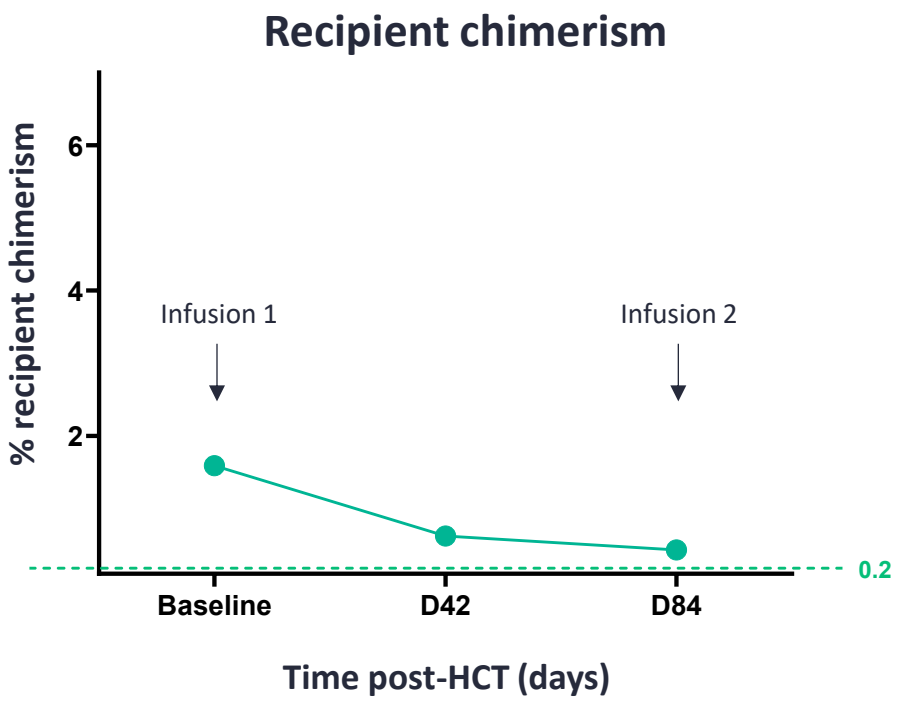
Donor chimerism results using investigational NGS assay (Alloheme) with data cut-off of 0.2% at indicated times post-HCT (# ± 3 days); ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; MDS, myelodysplastic syndromes; Haplo, haploidentical donor; MMUD, mismatched unrelated donor; Post-HCT, post-hematopoietic cell transplant; NGS, next-generation sequencing

Data as of June 8, 2026

Patient with p53-mutated ALL shows steady decrease in recipient chimerism

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	DL4 Haplo	DL4 Haplo	DL3 MMUD	DL4 Haplo	DL4 Haplo	DL4 MMUD	DL4 Haplo	DL4 MMUD	DL4 MMUD	DL4 Haplo	DL4 Haplo	DL4 Haplo	DL4 MMUD	DL4 Haplo
Time post HCT#	AML-p53	MDS	AML	AML	ALL-p53	MDS-p53	AML	MDS	AML	MDS	AML	AML	MDS	AML
Prior to infusion	✗ ◆	✗	✗ ◆	✓ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✓ ◆
Day 35/42	✓	✗	✓	✓	✗	✓	✓	✓	✓	✗	✓	✗	✓	✓
Day 56/63	✓ ◆	✗ ◆	✓ ◆	✓ ◆		✓ ◆	✓ ◆	✓ ◆	✓ ◆	◆	◆			
Day 77/84	✓	✓	✓		✗ ◆	✓	✓	✓						
Day 105	✓	●	✗ ◆											
Day 133	✓		✗											
Day 180	✓													

ALL is not included in Phase 3 protocol



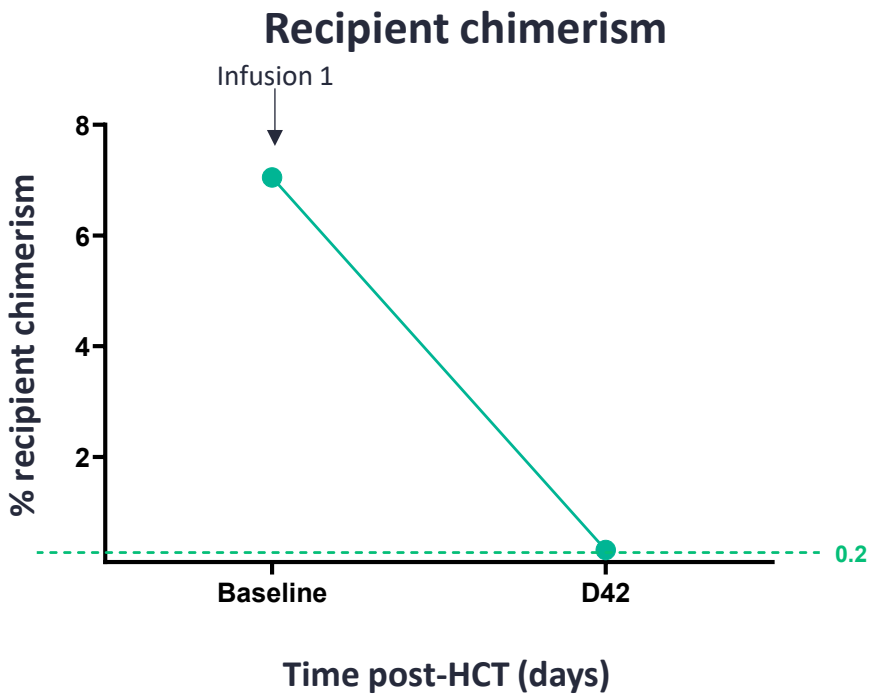
- Progressive decrease in recipient chimerism at each time point prior to second infusion

Donor chimerism results using investigational NGS assay (Alloheme) with data cut-off of 0.2% at indicated times post-HCT (# ± 3 days); ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; MDS, myelodysplastic syndromes; Haplo, haploidentical donor; MMUD, mismatched unrelated donor; Post-HCT, post-hematopoietic cell transplant; NGS, next-generation sequencing

Data as of June 8, 2026

Patient with high recipient chimerism post-transplant shows dramatic reduction following first infusion of TSC-101

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	DL4	DL4	DL3	DL4	DL4	DL4	DL4	DL4	DL4	DL4	DL4	DL4	DL4	DL4
	Haplo	Haplo	MMUD	Haplo	Haplo	MMUD	Haplo	MMUD	MMUD	Haplo	Haplo	Haplo	MMUD	Haplo
Time post HCT#	AML-p53	MDS	AML	AML	ALL-p53	MDS-p53	AML	MDS	AML	MDS	AML	AML	MDS	AML
Prior to infusion	✗ ◆	✗	✗ ◆	✓ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✗ ◆	✓ ◆
Day 35/42	✓	✗	✓	✓	✗	✓	✓	✓	✓	✗	✓	✗	✓	✓
Day 56/63	✓ ◆	✗ ◆	✓ ◆	✓ ◆		✓ ◆	✓ ◆	✓ ◆	✓ ◆	◆	◆			
Day 77/84	✓	✓	✓		✗ ◆	✓	✓	✓						
Day 105	✓	●	✗ ◆											
Day 133	✓		✗											
Day 180	✓													



- Dramatic decrease in recipient chimerism three weeks after first infusion
- Chimerism just above assay cutoff of 0.2%

Donor chimerism results using investigational NGS assay (Alloheme) with data cut-off of 0.2% at indicated times post-HCT (# ± 3 days); ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; MDS, myelodysplastic syndromes; Haplo, haploidentical donor; MMUD, mismatched unrelated donor; Post-HCT, post-hematopoietic cell transplant; NGS, next-generation sequencing

TSCAN THERAPEUTICS

Data as of June 8, 2026

No patients in Cohort C have relapsed to date, with higher rates of complete donor chimerism compared to control-arm patients

% Patients with complete donor chimerism

	Cohort A	Cohort C	Control
Immediately post-HCT	37% (7/19)	14% (2/14)	24% (4/17)
~3 weeks after infusion 1	79% (15/19)	79% (11/14)	61% (11/18)[#]
~3 weeks after infusion 2	73% (11/15)[†]	100% (5/5)*	53% (9/17)[#]

[†] 15/19 patients received two or more infusions of TSC-101; Of the 4 patients that only received one infusion, 3 achieved and maintained complete donor chimerism within 3 weeks of receiving their infusion

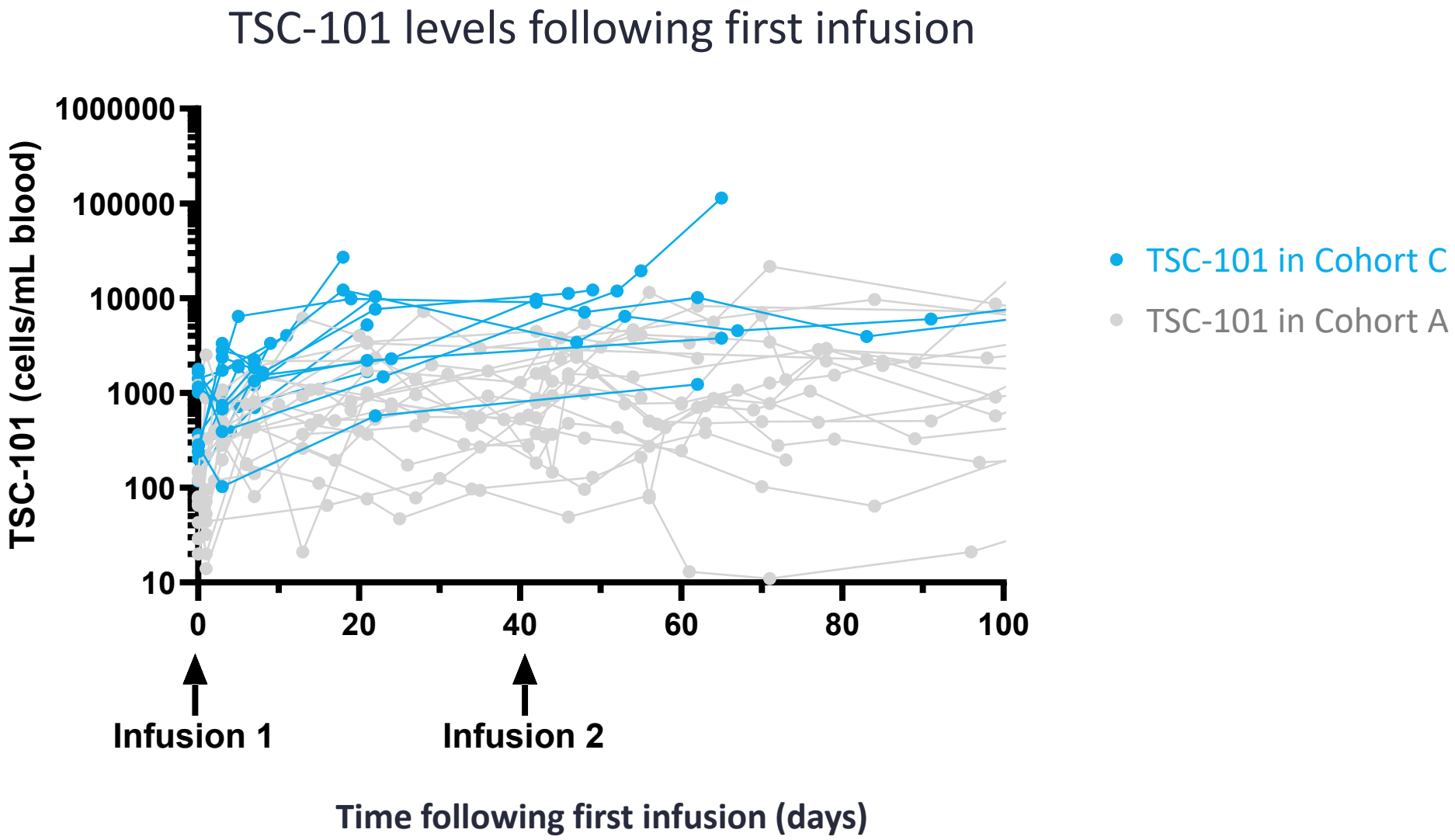
* Patient receiving dose level 3 subsequently showed mixed donor chimerism

[#] For the control arm, day 35/42 and day 77/84 were deemed the comparable time points to ~3 weeks post first and second infusions of TSC-101

Post-HCT, post-hematopoietic cell transplant

Data as of June 8, 2026

TSC-101 in Cohort C continues to show high levels of circulating TCR-T cells

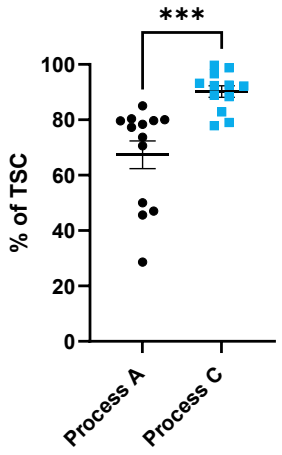


Data on file; Data as of June 8, 2026

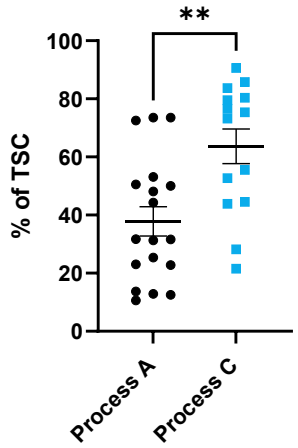
TSC-101 in Cohort C shows higher markers of proliferation, activation, and cytotoxicity than in Cohort A

Ki67 (proliferation) is higher in Cohort C

2hr

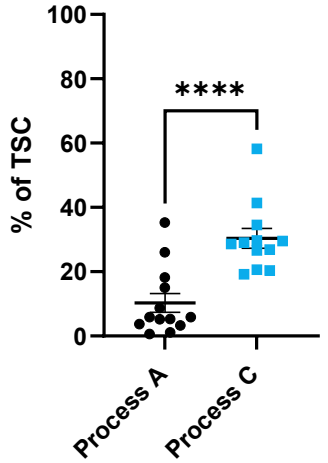


D7



CD28 (activation) is higher in Cohort C

2hr



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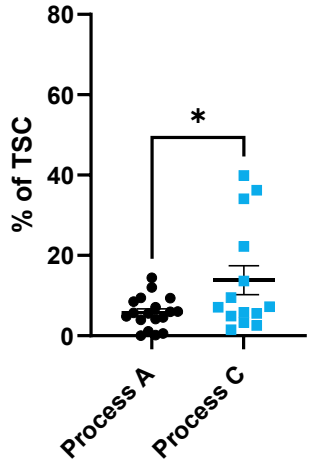
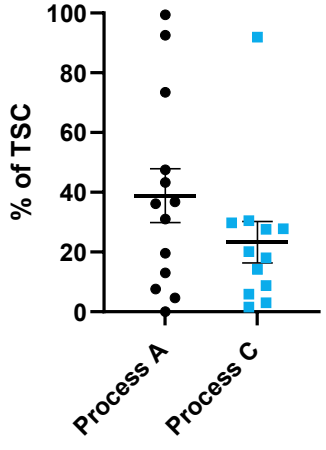


Granzyme B (cytotoxicity) is higher 7 days post infusion in Cohort C

2hr



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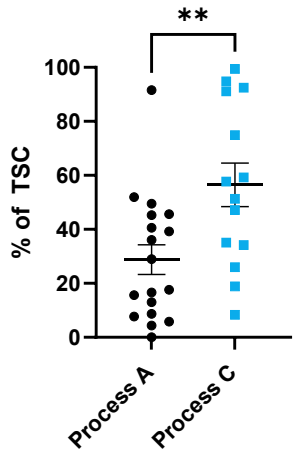


Data on file; Data as of June 8, 2026

Heme Program:
Review of Cohort C Data

TSCAN THERAPEUTICS

Patients are generally well balanced across arms, although Cohort C included a higher percentage of patients with MRD-positive disease prior to transplant

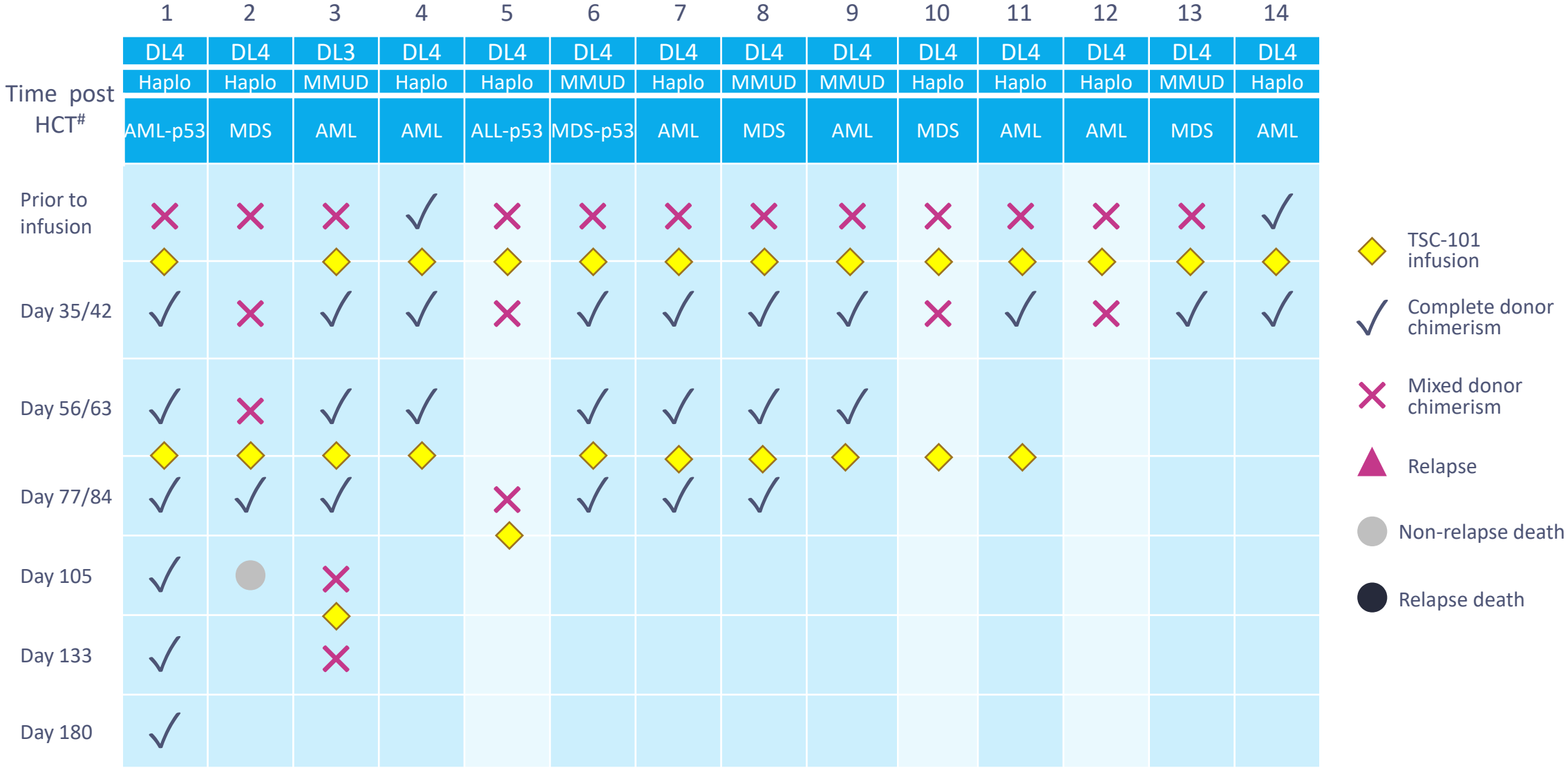
		TSC-101 Cohort A	TSC-101 Cohort C	Control
Evaluable Subjects*		19	14	19
Age, Median years (Range)		65 (52-74)	68 (28-79)	66 (23-77)
Sex, Male		13 (68%)	9 (64%)	9 (47%)
Underlying Disease	ALL	2 (11%)	1 (7%)	1 (5%)
	AML	13 (68%)	8 (57%)	10 (53%)
	MDS	4 (21%)	5 (36%)	8 (42%)
TP53 mutated		6 (32%)	3 (21%)	4 (21%)
MRD-positive pre-HCT		12 (63%)	9 of 12 (75%)	10 (53%)
Donor type	Haplo	19 (100%)	9 (64%)	18 (95%)
	MMUD	--	5 (36%)	1 (5%)

Mixed chimerism post-HCT (~D21)	11 of 18 (61%)	12 of 14 (86%)	13 of 17 (76%)

*Subjects on the treatment arm who received ≥1 infusion of TSC-101 and on the control arm who reached Day 21 post-HCT; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; MDS, myelodysplastic syndromes; Pre-HCT MRD, pre-hematopoietic cell transplantation minimal residual disease; Haplo, haploidentical donor; MMUD, mismatched unrelated donor

Data as of May 20, 2026

11 of 14 patients achieved complete donor chimerism within ~3 weeks of receiving first infusion of TSC-101



Donor chimerism results using investigational NGS assay (Alloheme) with data cut-off of 0.2% at indicated times post-HCT (#± 3 days); ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; MDS, myelodysplastic syndromes; Haplo, haploidentical donor; MMUD, mismatched unrelated donor

Data as of June 8, 2026

Heme Phase 3 trial design

Targeting residual disease to prevent relapse in patients undergoing allogeneic HCT

TSCAN THERAPEUTICS

Pivotal trial design for TSC-101 uses a biologically-assigned control arm to support relapse-free survival as the primary endpoint

- Agreement reached with the FDA to use a **pivotal trial design that mirrors the ALLOHA™ Phase 1 trial**
- All patients that are eligible for TSC-101 will be assigned to the investigational arm
- Trial **powered at 85% for a Hazard ratio of 0.52** with readout at 25 months (no interim analysis), **n= ~150/arm**

Study Population

- AML or MDS
- Age ≥ 18 years
- Undergoing first allo-HCT
- Eligible for reduced intensity conditioning (RIC)

Key Endpoints

- **Primary Endpoint**: RFS
- Key Secondary Endpoint: OS, EFS

Biological assignment

Investigational Arm

A*02:01-positive subject with A*02-negative donor

Control Arm

A*02:01-negative subject or A*02:01-positive subject with no available mismatched donor

RIC-based transplant

Two infusions of TSC-101

AML: Acute myeloid leukemia; MDS: Myelodysplastic syndromes; Allo-HCT: Allogeneic hematopoietic cell transplantation; RIC: Reduced intensity conditioning; RFS: Relapse-free survival; OS: Overall survival; EFS: event free survival

Important protocol modifications from Phase 1 to Phase 3 study

	Phase 1	Phase 3
Population	**AML, ALL, MDS**	**AML, MDS**
Donor Type	Haplo in Cohort A; Haplo and MMUD enrolled in Cohort C	Haplo and MMUD
Enrollment Ratio	Treatment:Control ~1:1	Treatment:Control 1:1 with flexibility up to ~1.5:1
Enrollment Stratification	**No balancing**	**Disease type & poor prognostic genotype***
Clinical Eligibility	**Transplant-eligible**	**AML in CR1, CR2 or <5% blasts; MDS <10% blasts**
Maintenance Medications	IDH1/2, FLT3, BCR-ABL TKIs delayed use in both arms; HMAs restricted	IDH1/2 & FLT3-Is at any time; Menin inhibitors and HMA's delayed for tx arm; all prespecified
Relapse Definitions	Physician Specified	ELN 2022 (AML), modified R-IWG 2023 (MDS) or cytogenetic relapse

*Any TP53, inversion 3, or t(3;3) participant; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; MDS, myelodysplastic syndromes; Haplo, haploidentical donor; MMUD, mismatched unrelated donor; CR, complete response; IDH, isocitrate dehydrogenase; FLT3, FMS-like tyrosine kinase 3; BCR-ABL, breakpoint cluster region-Abelson; TKI, tyrosine kinase inhibitors; HMAs, hypomethylating agents; Is, inhibitors; Tx, treatment arm; ELN, European LeukemiaNet; R-IWG, revised international working group

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Strategies developed to achieve balance between treatment and control arms

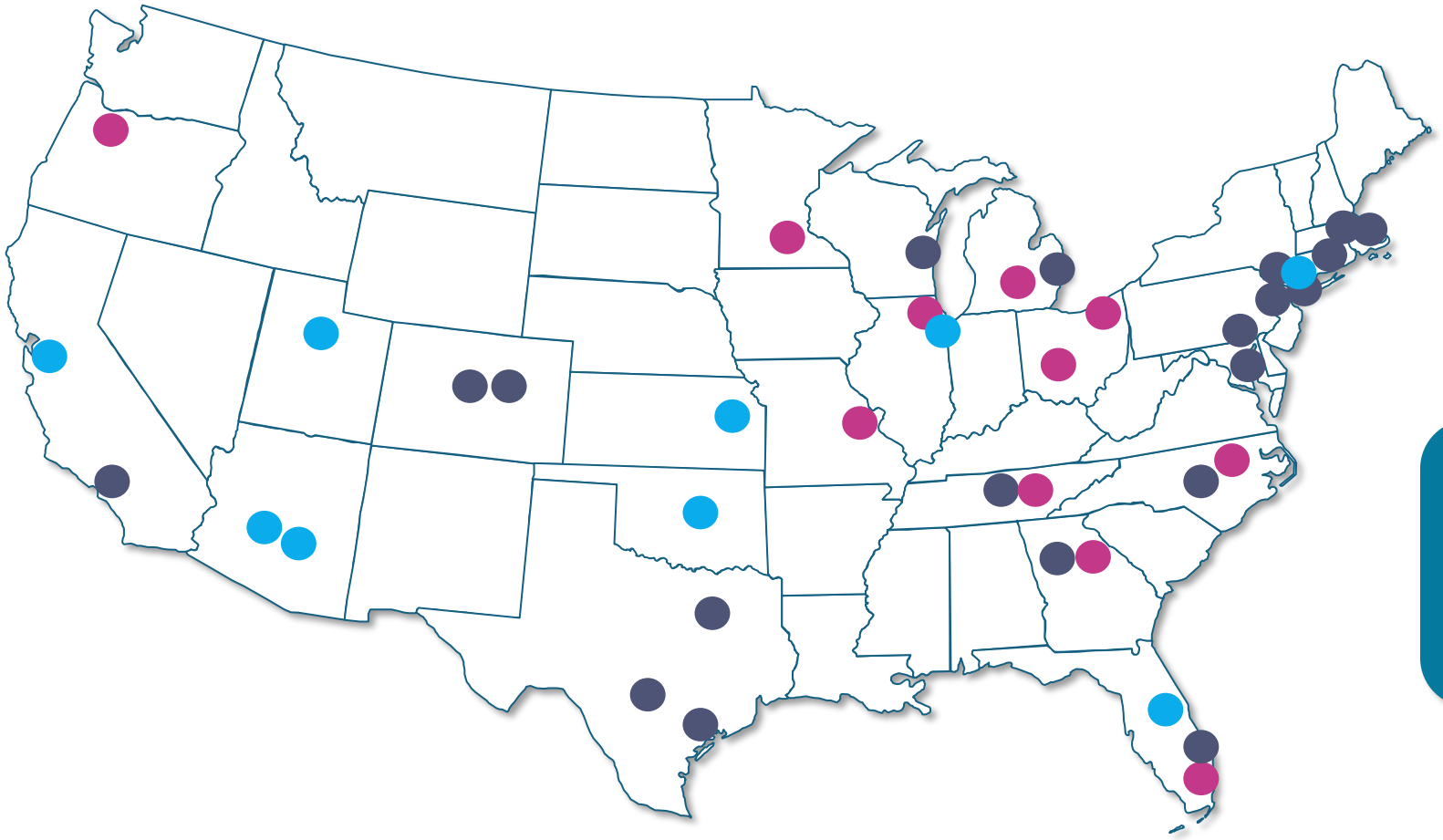
Goal: Balanced enrollment of high-risk vs. intermediate/low risk subjects between treatment and control arms

Methods to Achieve Balance

Enrollment	Statistical
Stratification by disease type and poor prognostic genotype status*	Separate models per disease type
Regular tracking and review with PIs	Use of non-parametric models (Cox proportional hazard)
Pausing enrollment in a stratum^	Conservatively powered study

*Any TP53, inversion 3, t(3;3) participant; ^ Strata include disease (AML, MDS) and risk status

US geographical footprint ensures appropriate patient access to treatment



ATCs Color Coded by Category:

- Current clinical trial sites
- Potential additional sites for pivotal
- Potential additional sites for commercial

- **~120** centers conduct allo-HCT
- **21** sites in Phase 1 clinical trial
- **30** sites in Phase 3 trial

ATC, authorized treatment center; Allo-HCT, allogenic hematopoietic cell transplant

Heme program:

HLA and indication expansion

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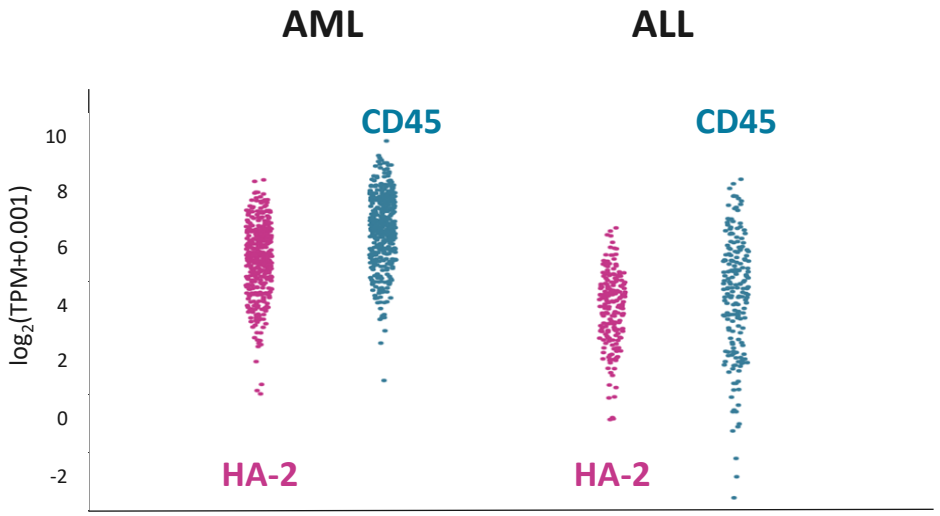
TCRs for additional HLA types will target epitopes on CD45, a universal source of antigens for heme malignancies

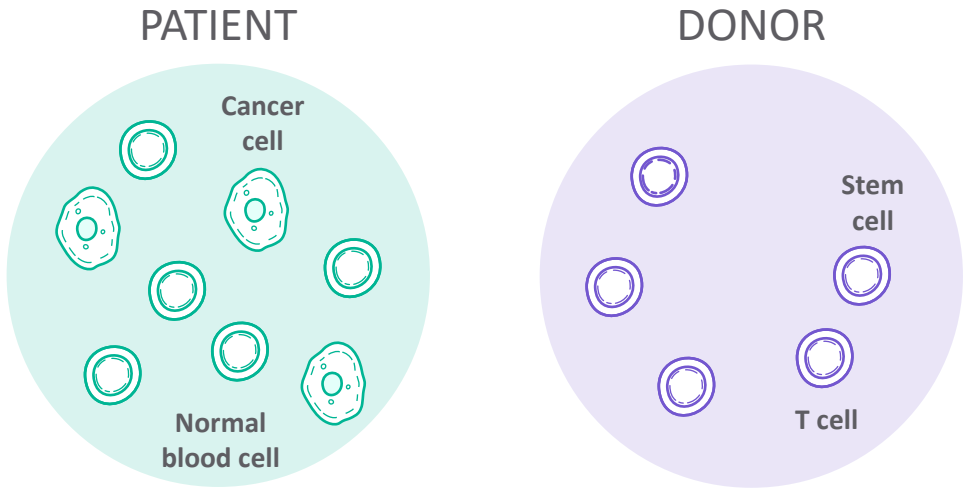
- CD45 is a lineage-specific antigen with expression in all hematopoietic cells, including HSCs
- CD45 is a large protein with many well-known epitopes for high frequency HLAs
- Antigen-negative donors will be selected by mismatching on HLA (using haploidentical and MMUD donors)

CD45 has high and uniform expression in AML and ALL



Source: TCGA

TSC-102 TCRs target CD45 antigens presented on patient but not donor HLAs



CD45 antigen HLA-A*03:01 positive

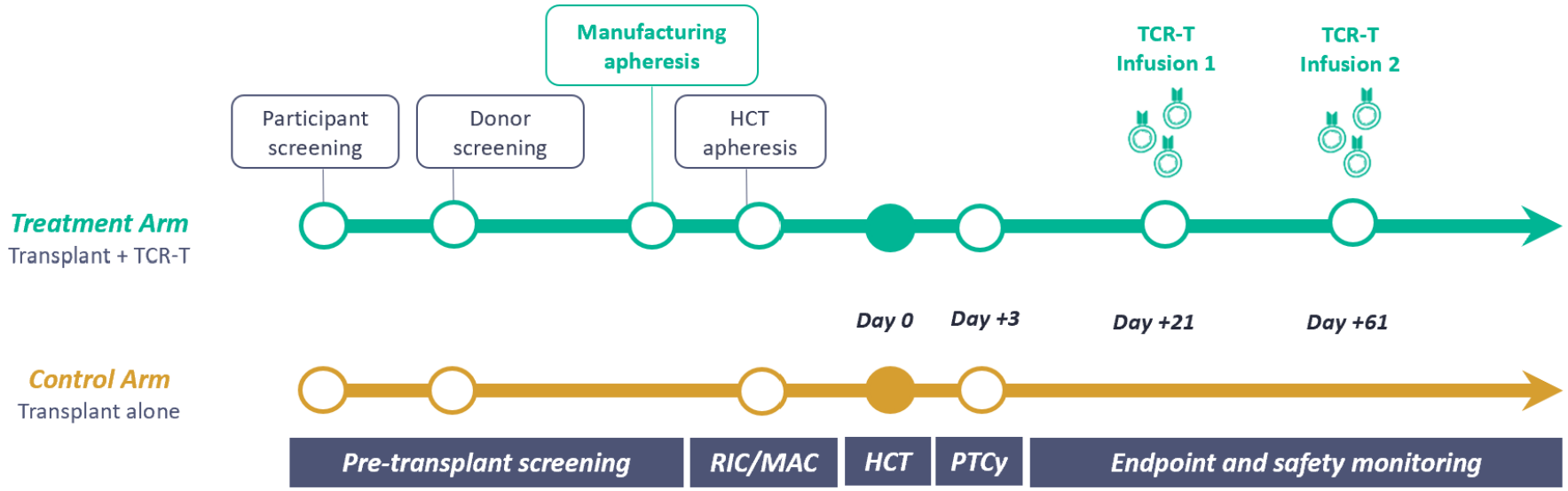
CD45 antigen HLA-A*03:01 negative

ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; HLA, human leukocyte antigen; HSC, hematopoietic stem cells; MMUD, mismatched unrelated donor

Data on file

INDs cleared for TSC-102-A03 and TSC-102-A01; Phase 1 planned for Q4 2026

- Study expands the heme program
  - Two additional HLA types
  - MAC conditioning
  - ALL and Non-Hodgkin Lymphoma in addition to AML and MDS



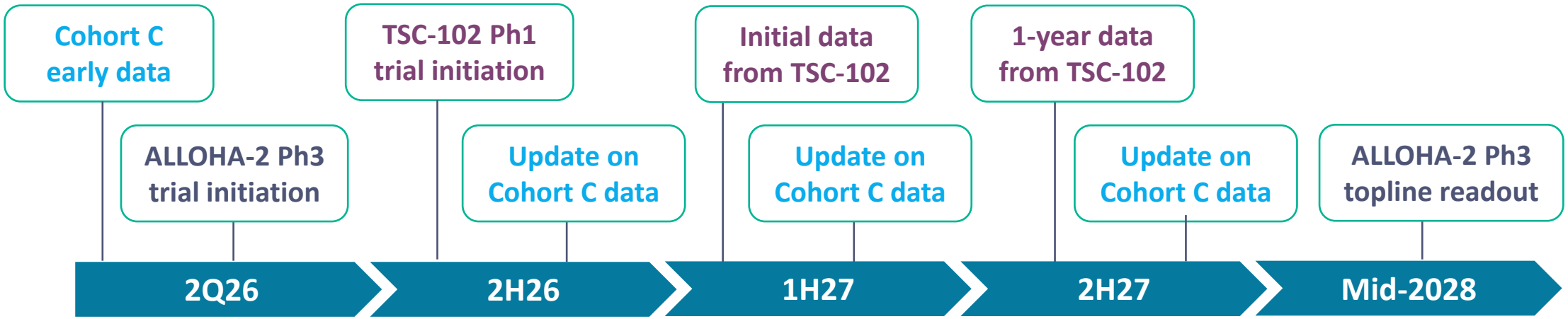
Indications
- AML, ALL, MDS
- Non-Hodgkin Lymphoma

Study Characteristics
- Dose escalation
- RIC or MAC
- Haplo or MMUD

ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; MDS, myelodysplastic syndromes; RIC, reduced intensity conditioning; MAC, myeloablative conditioning; HLA, human leukocyte antigen; Haplo, haploidentical donor; MMUD, mismatched unrelated donor; HCT, hematopoietic cell transplant; PTCy, post-transplant cyclophosphamide

Continuous data read-outs over the next two years provides clinical de-risking

- ALLOHA-2 Phase 3 trial will take ~2 years, with a topline readout targeted for mid-2028
- Cohort C uses the same manufacturing process as the ALLOHA-2 Phase 3 trial, and is expected to provide supportive data flow throughout the duration of the pivotal study
- TSC-102 Phase 1 trial is expected to provide insight into market expansion opportunities



TSCAN THERAPEUTICS

Market opportunity

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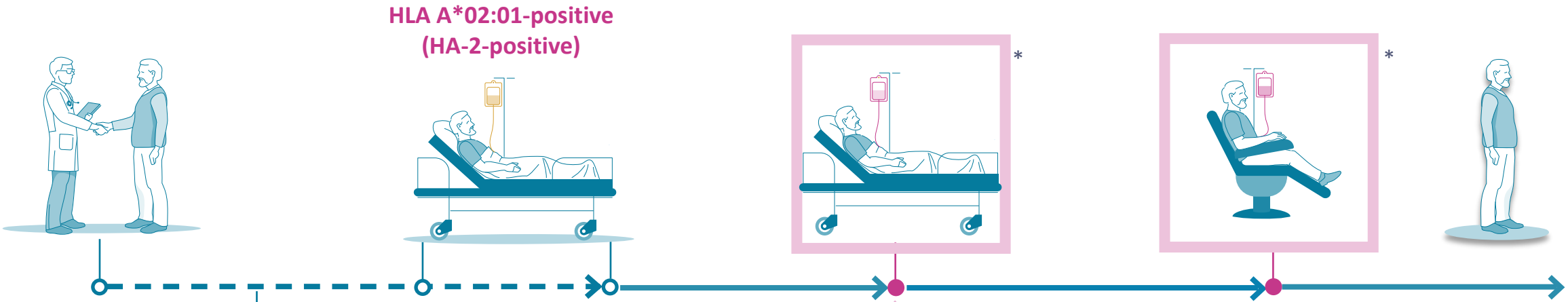
TSC-101 is incorporated seamlessly into current transplant journey



Donor apheresis 1: T-cells
Donor apheresis 2: Stem cells

- Referral to existing transplant centers is current standard of care
- Patient and donor pairing conducted through standard HLA testing
- Flexibility for inpatient/outpatient infusion(s)
- Product manufacturing is completed well before planned infusion on Day 21

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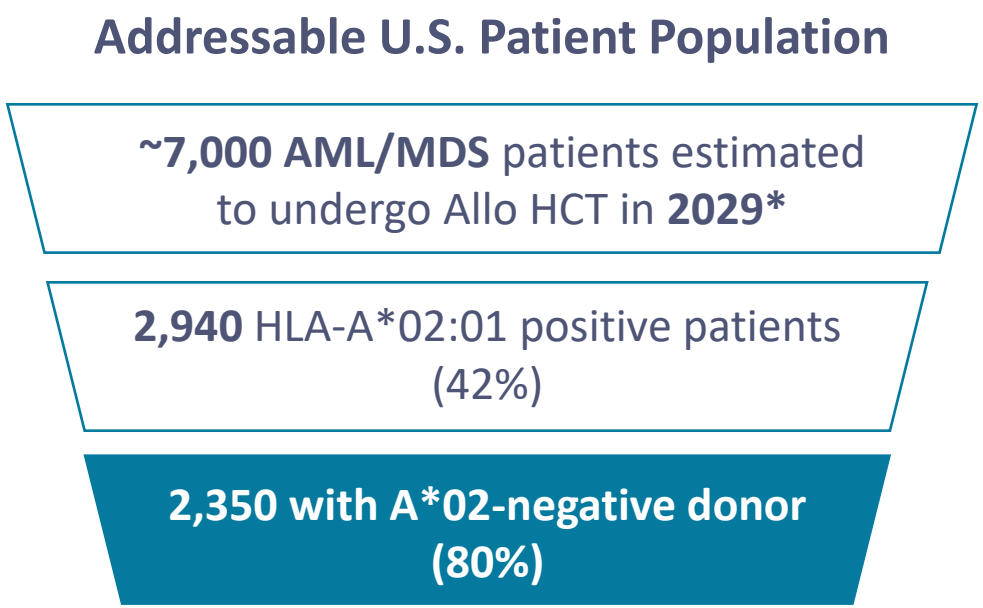
* Infusion 1 & 2 site of care (inpatient vs outpatient) determined by administering physician. Infusion 1 may be given upon engraftment and between days 14-35 post transplant, infusion 2 would be administered about 40 days after infusion 1.

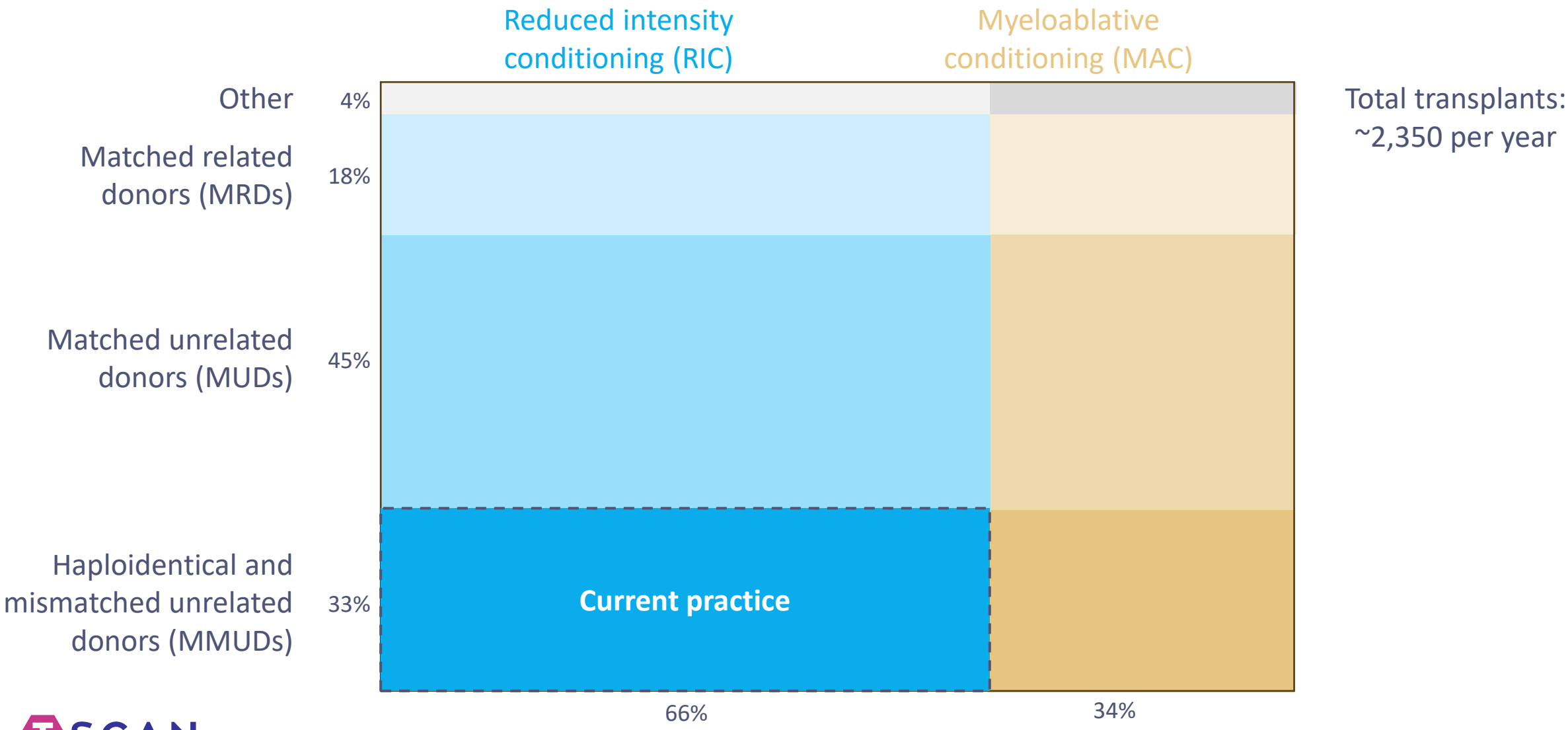
At launch, ~2,350 patients will qualify for TSC-101 in the U.S. based on HLA type



Requires transplant with reduced intensity conditioning and haplo/MMUD donor

Sources: Spellman SR, Xu K, Oloyede T, Ahn KW, Akhtar O, Bolon YT, Broglie L, Bloomquist J, Bupp C, Chen M, Devine SM, El-Jurdi N, Hamadani M, Hengen M, Huppler AH, Jaglowski S, Kuxhausen M, Lee SJ, Moskop A, Page KM, Pasquini MC, Perez W, Phelan R, Rizzo D, Saber W, Stefanski HE, Steinert P, Tuschl E, Visotcky A, Vogel R, Auletta JJ, Shaw BE, Allbee-Johnson M. Current activity trends and outcomes in hematopoietic cell transplantation and cellular therapy - A report from the CIBMTR. Transplant Cell Ther. 2025 Aug;31(8):505-532. doi:10.1016/j.jtct.2025.05.014. Epub 2025 May 19. PMC12302970. Analyses from NMDP, allelefrequencies.net, ClearView Independent Analysis; Note: Addressable patient estimates based on future preference for RIC over MAC and use of haplo/MMUD transplants over MUD to enable TSC-101 eligibility. Allo HCT: allogeneic hematopoietic cell transplant; Haplo, haploidentical donor; MMUD: mismatched unrelated donor.

Market opportunity based on current transplant practice

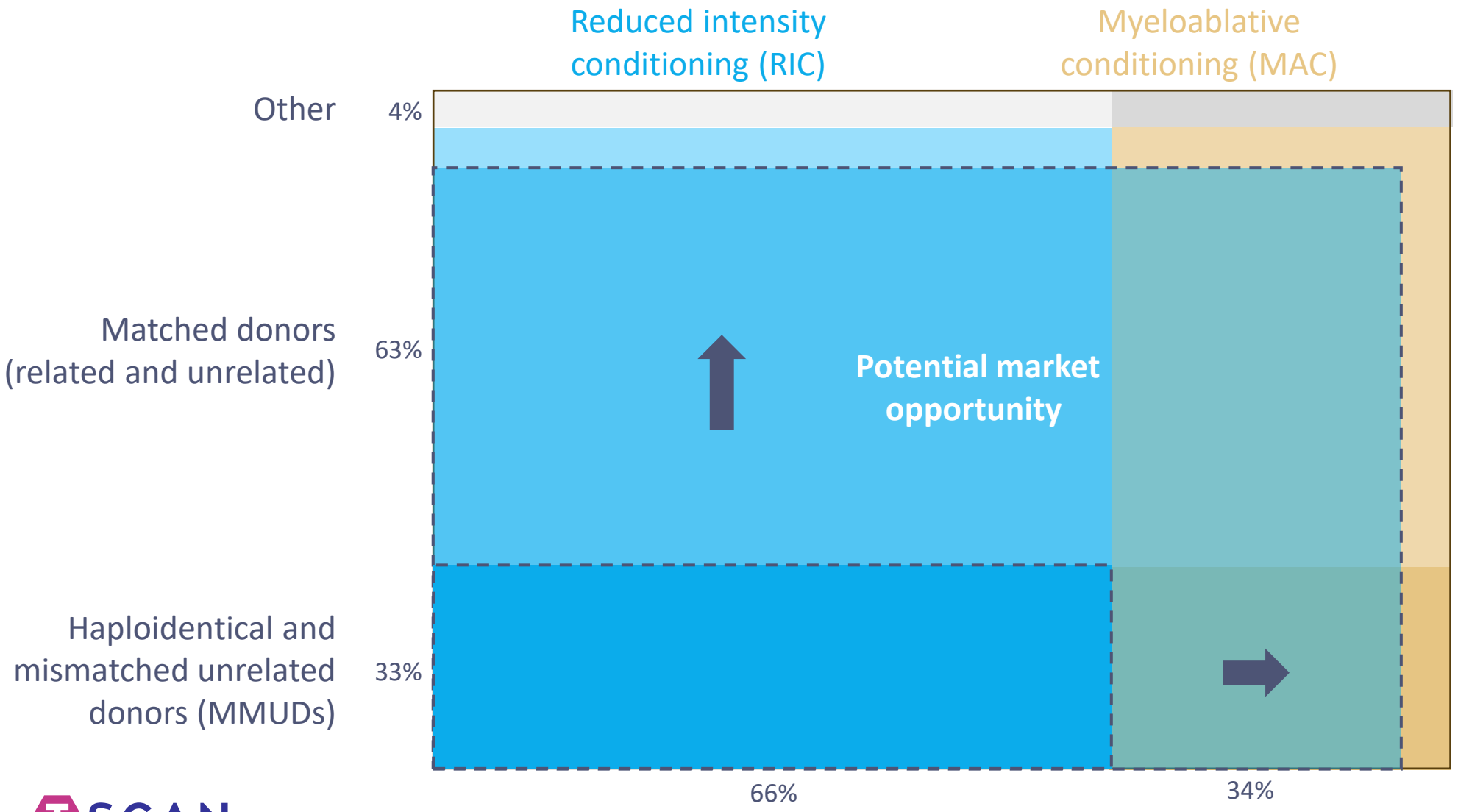


Total transplants: ~2,350 per year

Source: CIBMTR 2023

Assumes no change in clinical practice between 2023 and 2029

Expansion opportunity 1: Positive data expected to induce changes in clinical practice over time that increase the on-label use of TSC-101

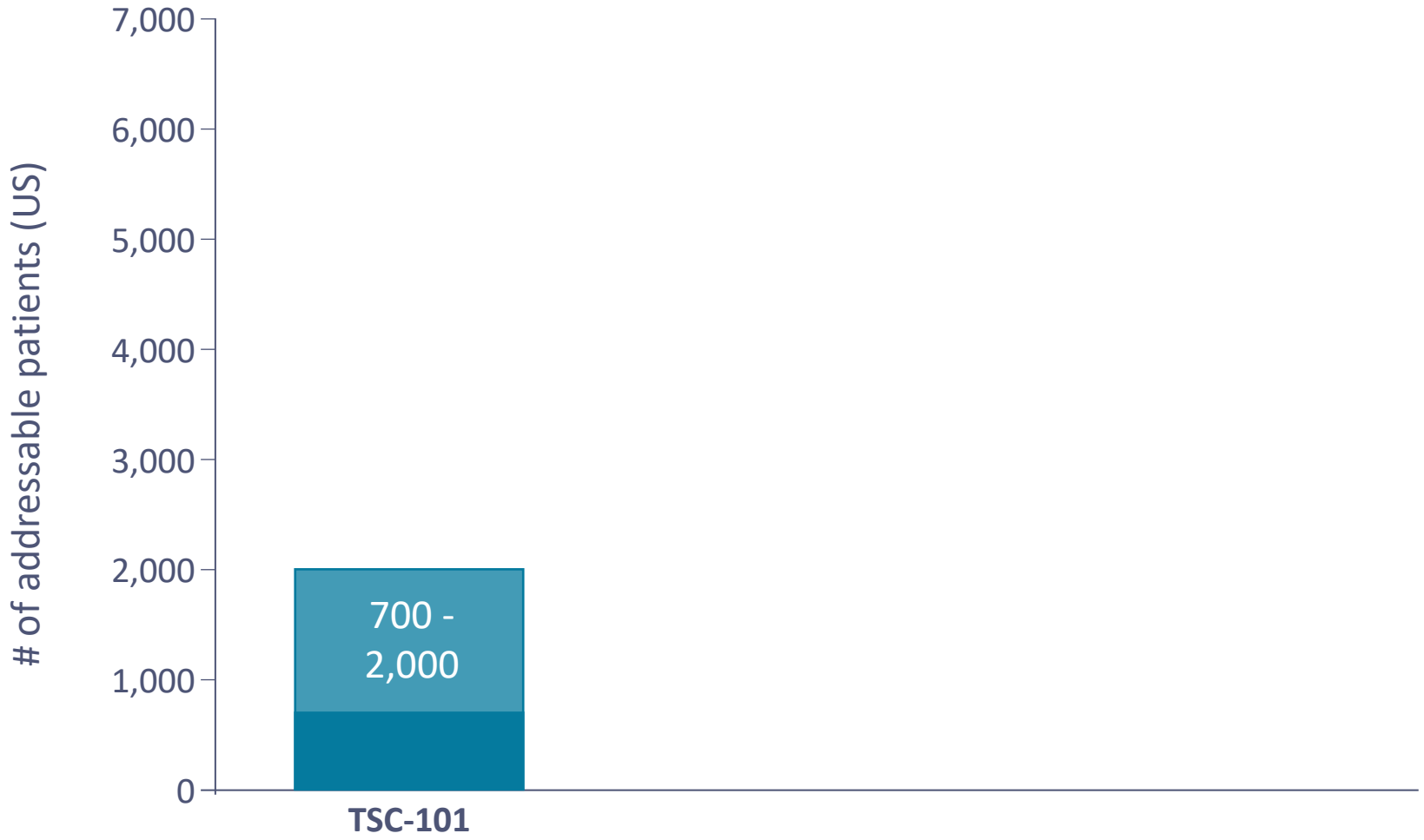


Total transplants: ~2,350 per year

Source: CIBMTR 2023

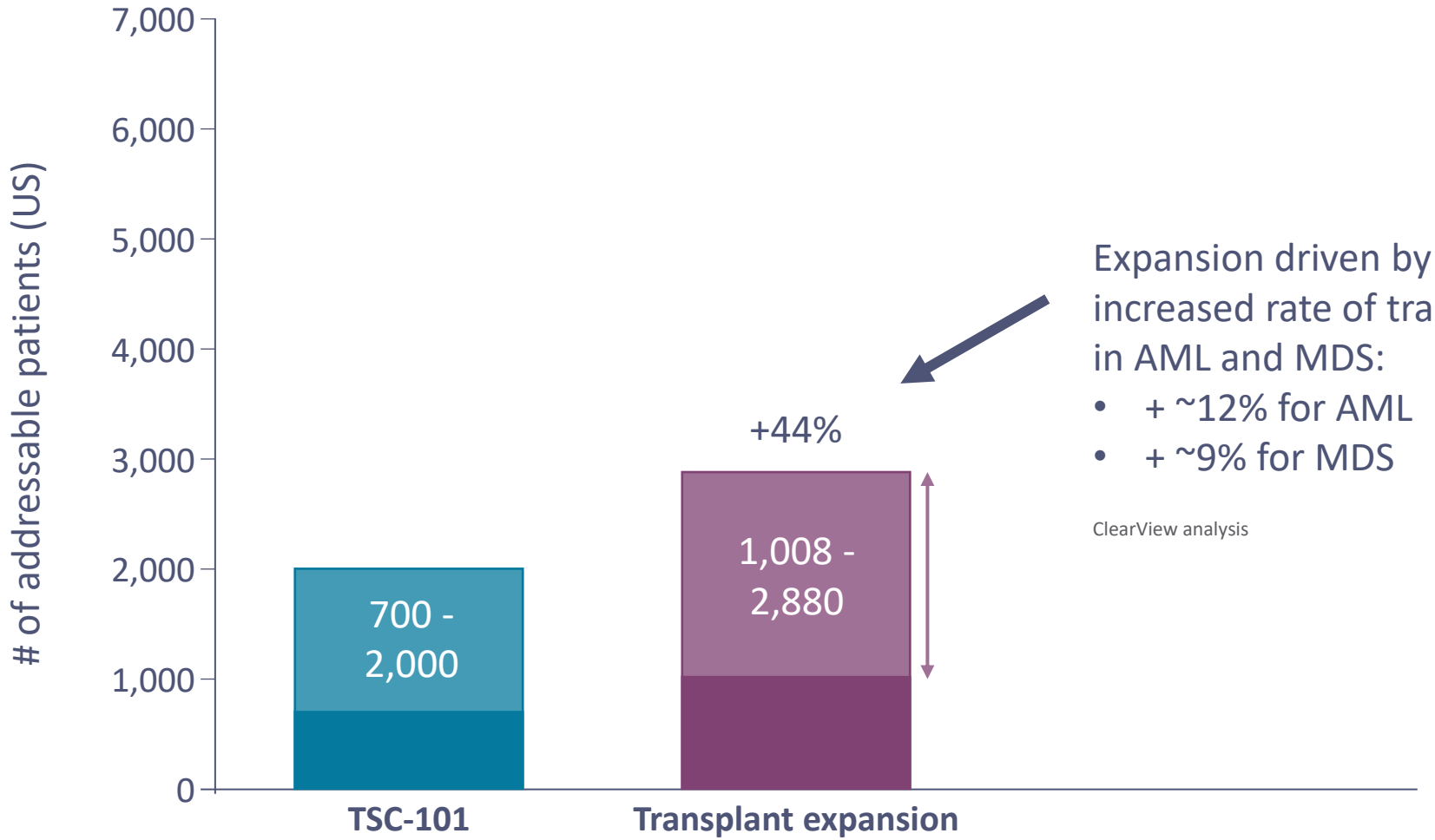
Use of haplo/MMUD donors and RIC is naturally increasing; TSC-101 should further catalyze this trend

Positive data expected to increase use of RIC and haplo/MMUD donors



Source: SEER, CIBMTR, EBMT, APBMT; RIC, reduced intensity conditioning; Haplo, haploidentical donor; MMUD, mismatched unrelated donor

Expansion opportunity 2: Increased use of transplant provides a way to reach over 2,800 AML and MDS patients per year in the U.S.



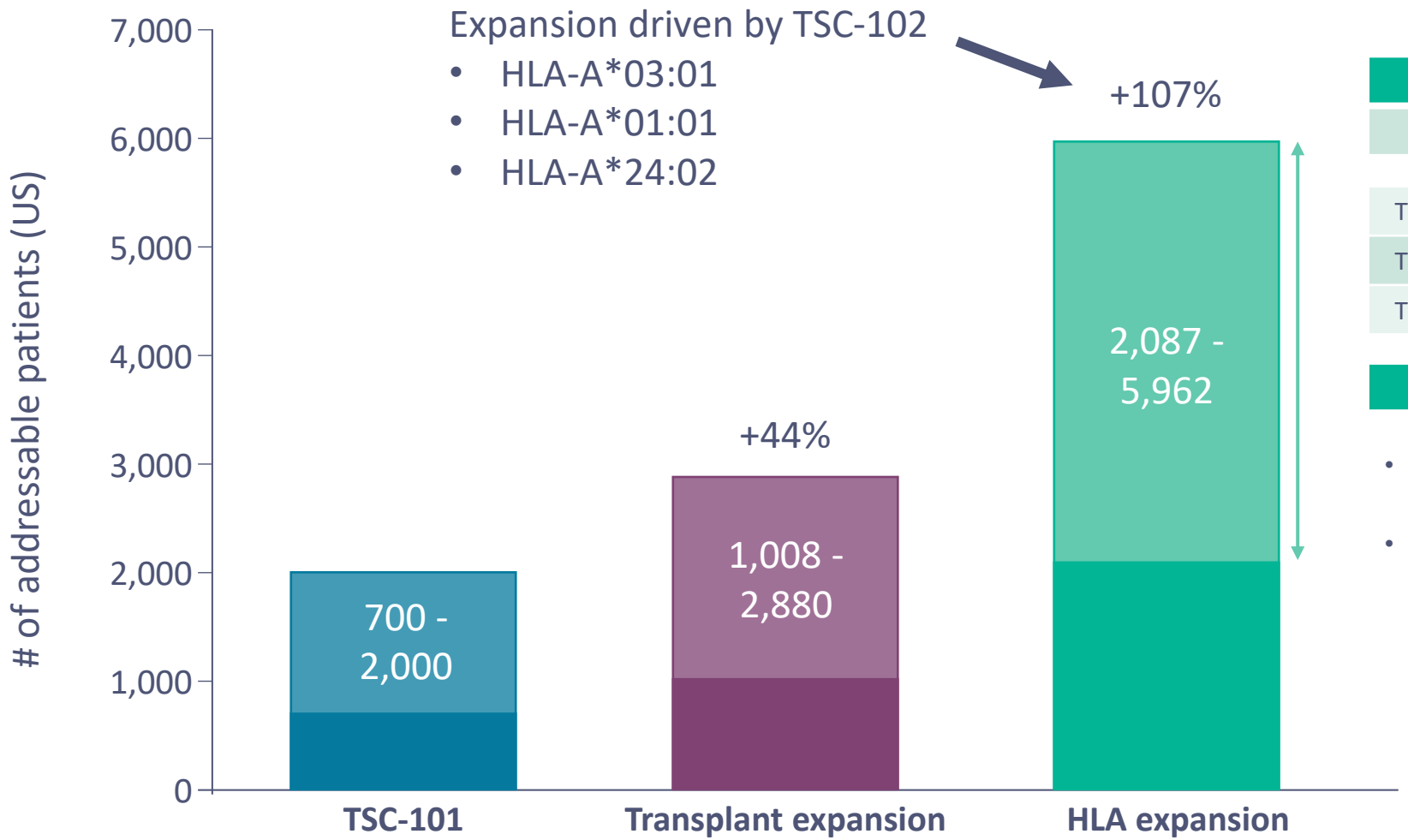
Expansion driven by increased rate of transplant in AML and MDS:

- + ~12% for AML
- + ~9% for MDS

ClearView analysis

Source: SEER, CIBMTR, EBMT, APBMT; AML, acute myeloid leukemia; MDS, myelodysplastic syndromes

Expansion opportunity 3: Products that address additional HLAs more than double the potential patient population



Candidate	HLA type	Frequency
TSC-101	A*02:01	42%
TSC-102-A01	A*01:01	24%
TSC-102-A03	A*03:01	22%
TSC-102-A24	A*24:02	17%
Total	**HLA total**	**82%**

- Accounts for overlap in addressable patient populations
- Assumes 85% probability of finding a mismatched donor

Source: SEER, CIBMTR, EBMT, APBMT; HLA, human leukocyte antigen

Q&A