SENTI BIO

SENTI-202 Initial Clinical Data

December 2024

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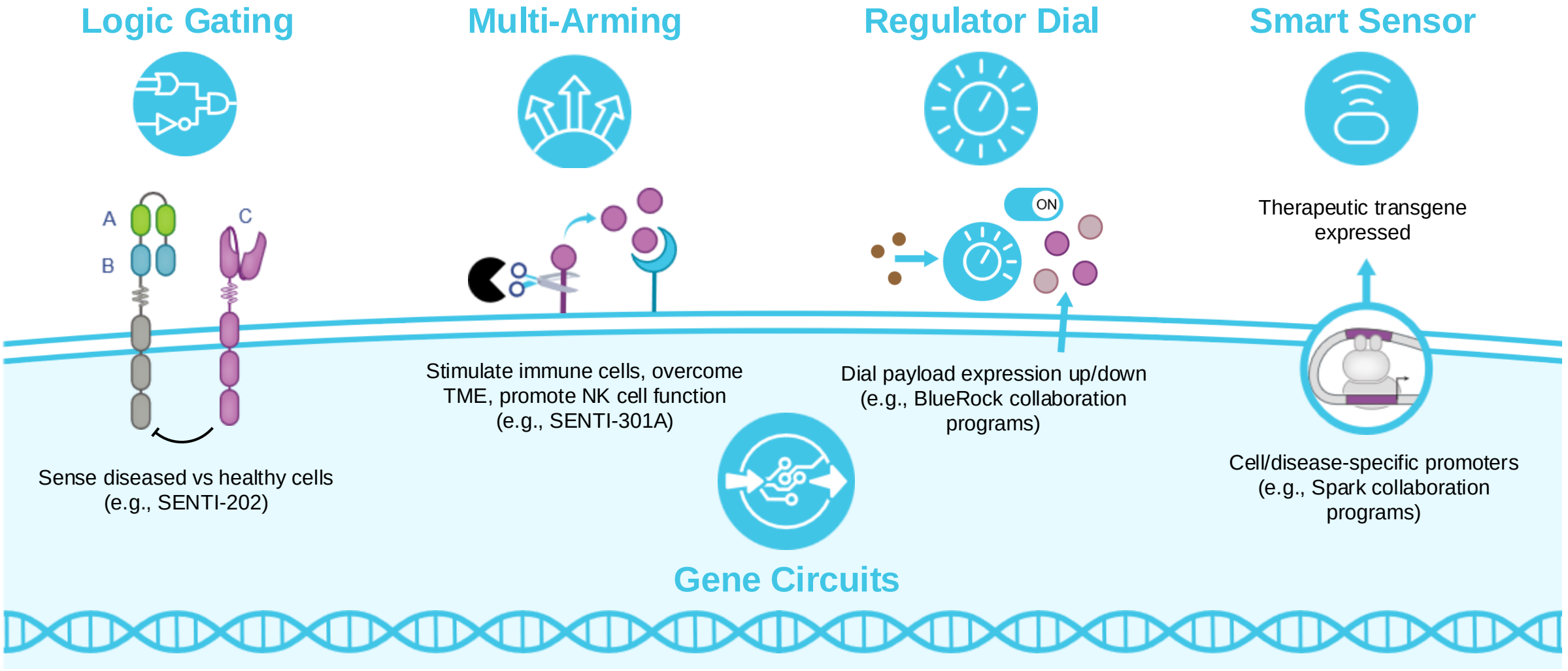
Corporate and Clinical Results Overview

Tim Lu, MD, PhD

CEO and Co-Founder, Senti Biosciences

Senti's Gene Circuits Designed to Enhance Precision, Control, and Activity of Cell & Gene Therapies



NK: Natural Killer; TME: Tumor Microenvironment

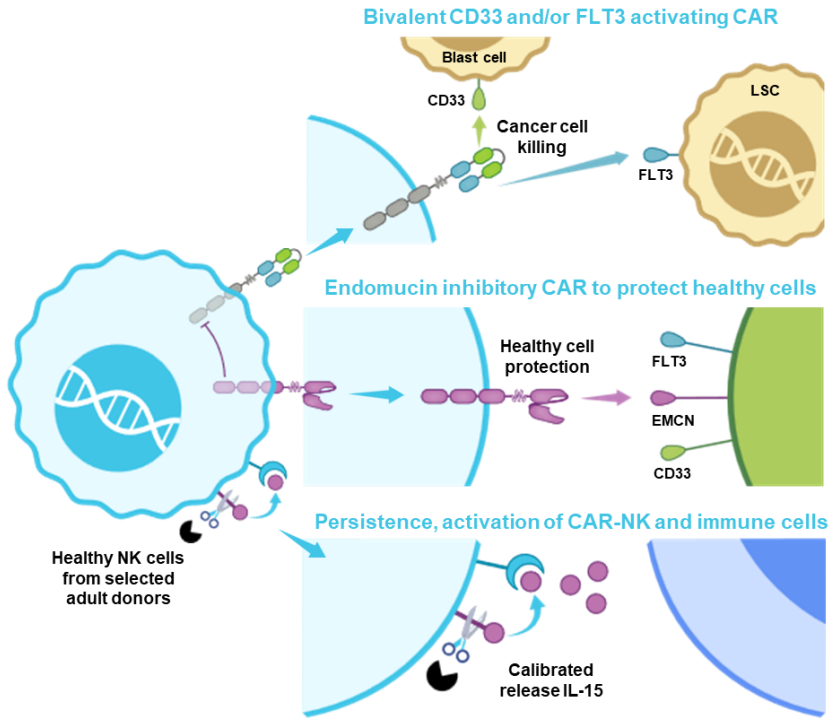
Internal Focus on Oncology, Partnering to Support Non-Oncology Indications

Programs	Target	Application	Preclinical	Early Stage Clinical	Late Stage Clinical	Collaborator
SENTI-202	CD33 and/or FLT3	AML, MDS and other blood cancers				
SENTI-301A[1]	GPC3	HCC and other solid tumors				CELEST 晟临生物
Multiple Gene Therapy Programs	Undisclosed	Eye, CNS and liver diseases				Roche Spark THERAPEUTICS
Multiple iPSC Cell Therapy Programs	Undisclosed	Regenerative medicine				BAYER BlueRock THERAPEUTICS

AML: Acute Myeloid Leukemia; CNS: Central Nervous System; HCC: Hepatocellular Carcinoma; MDS: Myelodysplastic Syndrome

[1] Collaboration with Celest for clinical development to treat solid tumors in China, with an option to expand to Hong Kong, Macau, and Taiwan

SENTI-202 Is a Potentially First-In-Class Selective Off-the-Shelf Investigational NK Cell Therapy for Blood Cancers



SENTI-202 Approach

- Logic Gating to overcome AML heterogeneity via clinically validated CD33 and FLT3 targets
- Logic Gating also to spare healthy cells via EMCN target, which is selectively expressed on HSCs

2024 Accomplishments

✓ First patient dosed in 2Q 2024

✓ Initial clinical data year-end 2024

- **2 of 3 R/R AML patients with MRD negative CR at first dose level**

SENTI-202 is designed to integrate validated mechanisms into one solution, engineered to solve key outstanding problems in AML

Completion of private placement financing will allow us to continue SENTI-202 clinical development, and obtain additional efficacy and durability data

CR: Complete Remission; EMCN: Endomucin; HSC: Hematopoietic Stem Cell; LSC: Leukemic Stem Cell; MRD: Measurable Residual Disease

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Unmet Need in Acute Myeloid Leukemia (AML)

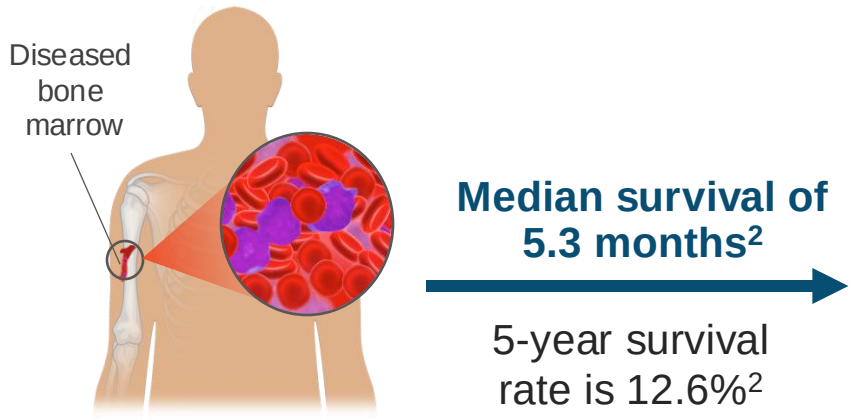
Stephen A. Strickland, MD, MSCI

Director of Leukemia Research, Sarah Cannon Research Institute

AML Is an Aggressive Leukemia with Poor Prognosis

- Rapidly progressing blood cell cancer with clonal proliferation of leukemic blasts from myeloid lineage
- Initial treatment includes intensive chemotherapy followed by HCT for younger, fit patients and venetoclax/ HMA based therapy for older, unfit patients
- Most patients will eventually relapse even with intensive therapy[1,2]
  - At relapse, ~20-30% CR with full hematologic recovery is reported with targeted agents in patients with FLT3/IDH1/2 mutations[1] or with salvage chemotherapy[2]

R/R AML patient outcome

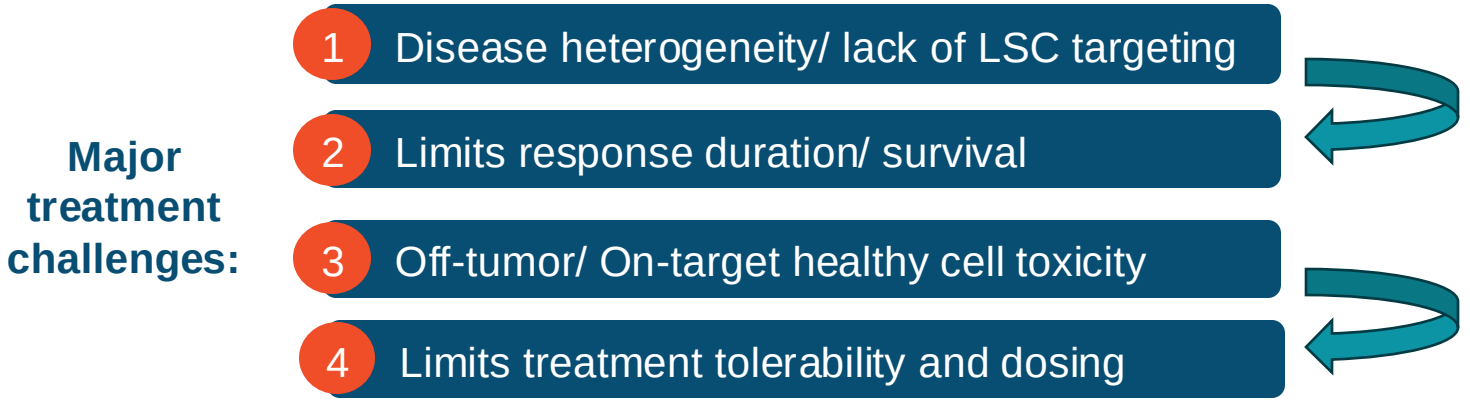


AML: Acute Myeloid Leukemia; CR: Complete Remission; HCT: Hematopoietic Cell Transplantation; HMA: Hypomethylating Agents; R/R: Relapsed/Refractory

[1] Dohner Blood 2022; [2] Brandwein AJBR 2020

There are Multiple Challenges to Developing Effective AML Therapies

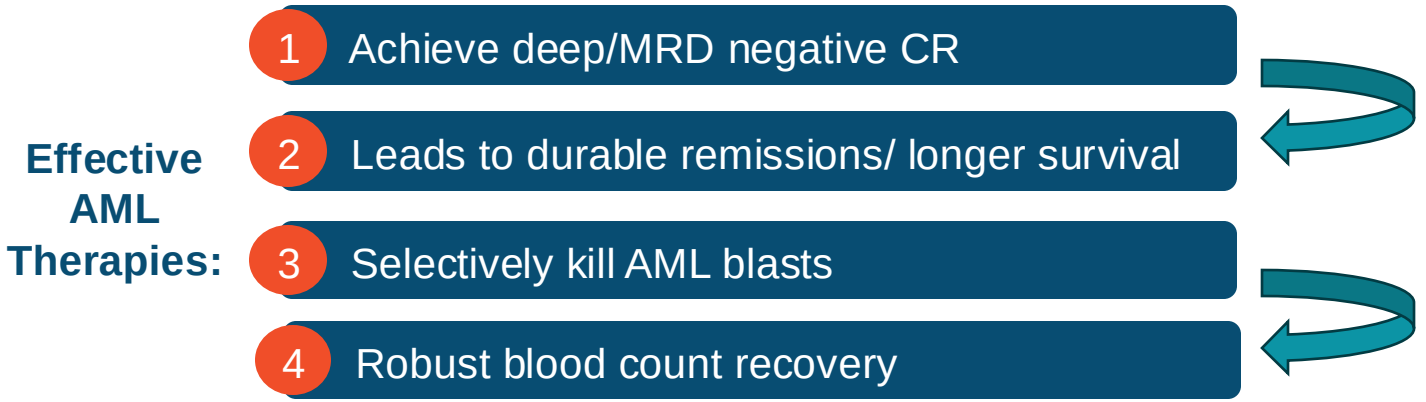
- Durability of response is limited due to:
  - Leukemic cell clonal heterogeneity which requires use of multi- targeted and combination therapies
  - Leukemia stem cells (LSCs), a small population with stem cell features such as being undifferentiated, drug resistant and with capacity to self-renew are held to be responsible for relapse initiation even with bulk AML blast clearance[1]
- Treatment tolerability limitations due to:
  - Healthy hematopoietic cell toxicity from limitations with AML targets that are often present on healthy hematopoietic stem cells (HSC)[1]
  - Overlapping toxicity profiles of approved AML therapies including bone marrow toxicity limits combination and sequential use of therapy



[1] Hansen Cancer Drug Resistance 2022

Achieving Deep Responses and Blood Count Recovery in AML Correlates with Longer Survival

- Detection of measurable residual disease (MRD) in patients with CR by conventional methods correlates with shorter remissions and poorer survival[1]
  - Measurement of MRD is not standardized across care centers currently with common methods used including multi-parametric flow cytometry, next generation sequencing (NGS), PCR in AML with specific mutations
  - Achieving MRD negative status correlates with longer remissions and increased survival
- Achievement of CR with full count recovery correlates with better prognosis compared to CR with incomplete or no count recovery[2]
  - CR includes bone marrow blasts <5% along with neutrophils ≥1.0 x 10^9/L (normal range 2.5-7.5 x 10^9/L) and platelets ≥100 x 10^9/L (normal range 150-400 x 10^9/L)



[1] Dohner Blood 2022; [2] Innes Blood 2018

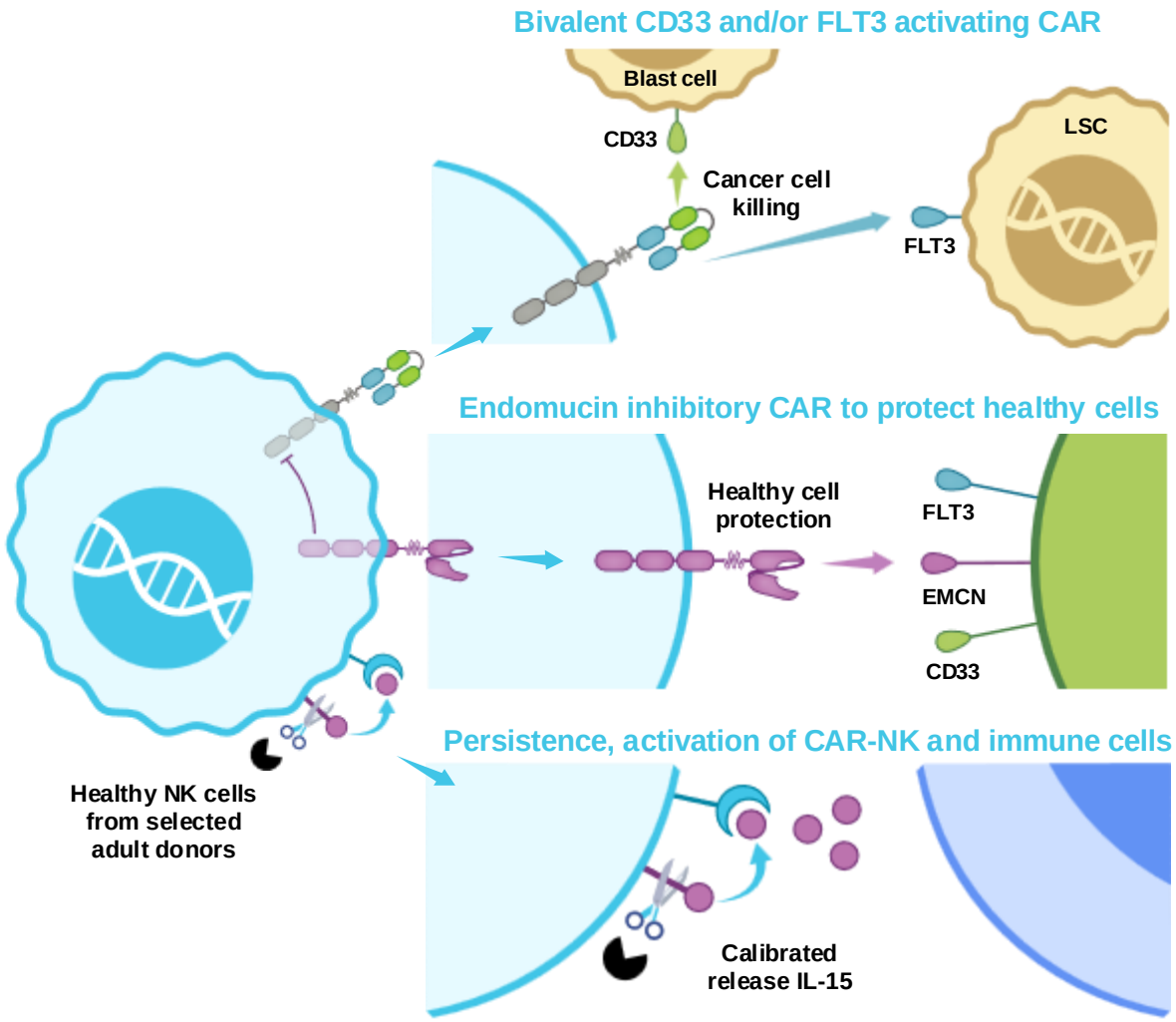
SENTI-202 Initial Clinical Data

Clinical Trial Data

Kanya Rajangam, MD, PhD

President, Head of R&D and CMO, Senti Biosciences

SENTI-202 Is a Potentially First-In-Class Selective Off-the-Shelf Investigational NK Cell Therapy for Blood Cancers



Activating CAR "kill" signal

- Bivalent CD33 and/or FLT3 CAR targets validated AML targets
- Potential for deep and durable responses in AML and other blood cancers

Inhibitory CAR "protect" signal

- Inhibition by endomucin (EMCN) protective antigen
- EMCN selectively expressed on healthy hematopoietic stem cells (HSCs) for potentially improved safety and increased therapeutic window

Calibrated release IL-15

- Cell expansion, persistence, and tumor killing

Designed to address key AML therapeutic challenges

SENTI-202 Phase 1 Trial (SENTI-202-101) Design[1]

High starting dose based on NK tolerability profile designed to enable early efficacy signal detection

Patient Population

- Adult patients
- R/R CD33 and/or FLT3 expressing heme malignancies
- 2 of 3 patients at each dose level with AML
- Received 1-3[2] prior AML treatments including targeted agents if FLT3, IDH1/2 mutation+

Study Design

- "3+3" study design
- Dose escalation followed by disease-specific expansion cohorts for AML and MDS
- Starting dose $1x10^9$ CAR+ NK cells and target dose $1.5x10^9$ CAR+ NK cells
- Plans to transition from Phase 1 to pivotal study

Planned Endpoints

- Safety, DLT, identify recommended Phase 2 dose
- Efficacy, including bone marrow recovery and MRD
- Pharmacokinetics (PK), pharmacodynamics (PD), biomarkers to supplement efficacy and immunogenicity

Multi-Dose Cycle

DLT: Dose Limiting Toxicity; R/R: Relapsed Refractory

[1] NCT06325748; [2] 1-2 prior for MDS

SENTI-202-101 Clinical Study Program Overview

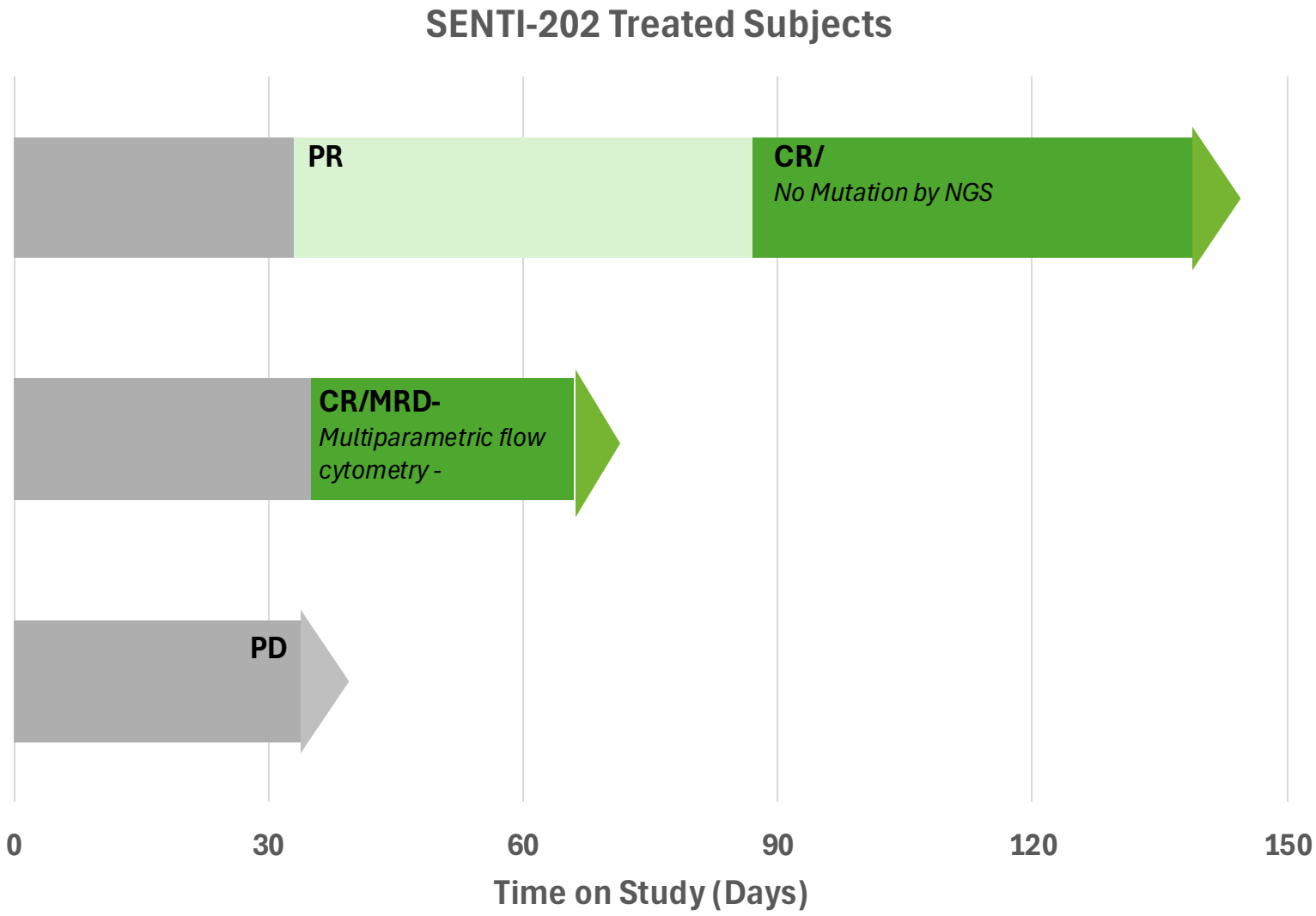
Early efficacy signals noted at the first dose level

- Enrollment
  - Dose Level 1 (1 billion CAR+ NK cells/dose) cleared: 3 R/R AML patients enrolled
  - Dose Level 2 (1.5 billion CAR+ NK cells / dose) cohort actively enrolling
- Safety Data
  - SENTI-202 is well tolerated with a tolerability profile consistent with other investigational NK cell therapies, and patients with underlying AML receiving lymphodepleting chemotherapy
- Efficacy Data
  - 2/3 patients Mutation Neg/ MRD Neg CR (including 1 with adverse risk genetics)
  - 1/3 patient no response/ progressive disease
- PK
  - SENTI-202 transgene consistently detected in the periphery in all 3 of the 1 billion CAR+ NK cells / dose patients

Data from an open clinical database of an ongoing study and PI/ site communication as of 19Sep2024

SENTI-202-101 Time on Study

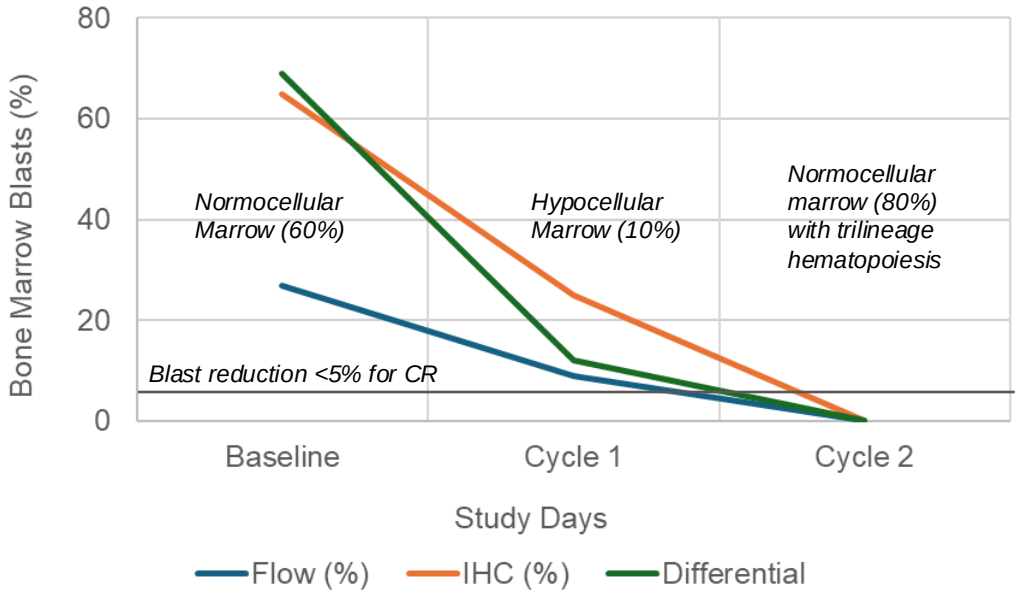
Early efficacy signals noted at the first dose level, both CR patients continue in CR at 1+ month

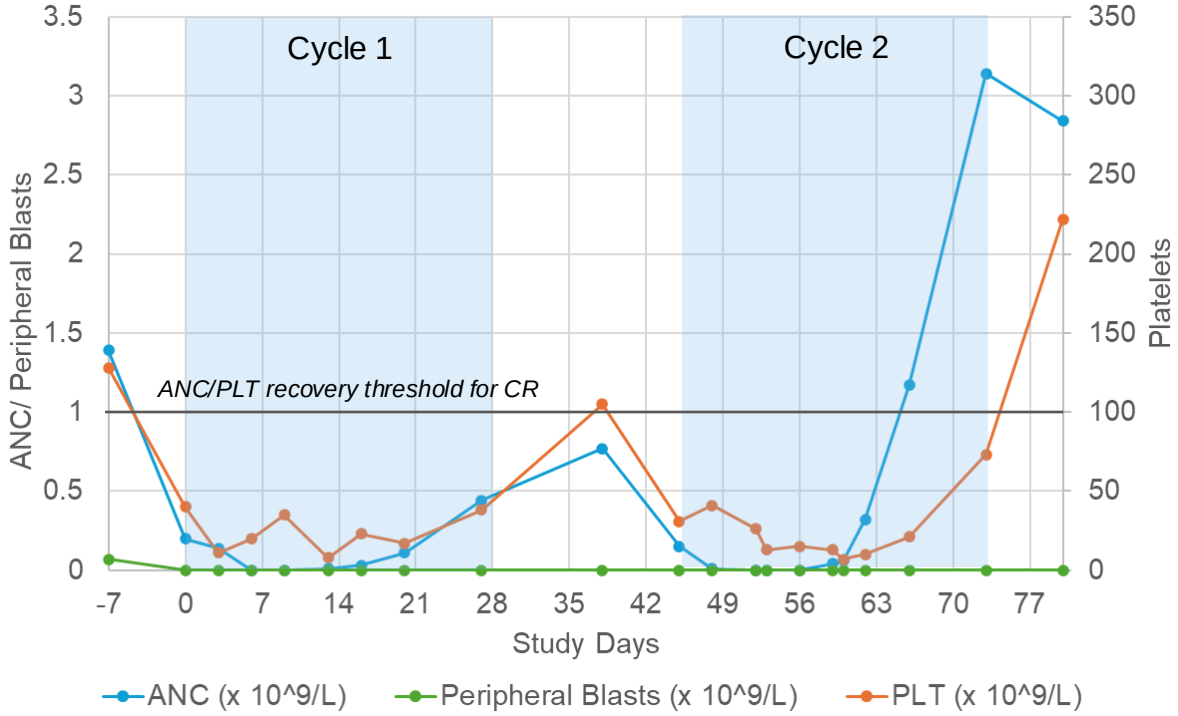


NGS: Next-generation sequencing; MRD: measurable residual disease
Data from an open clinical database of an ongoing study and PI/ site communication as of 19Sep2024

SENTI-202-101 – Patient 1

First Patient with CR after 2 cycles and clearance of all AML mutations by NGS





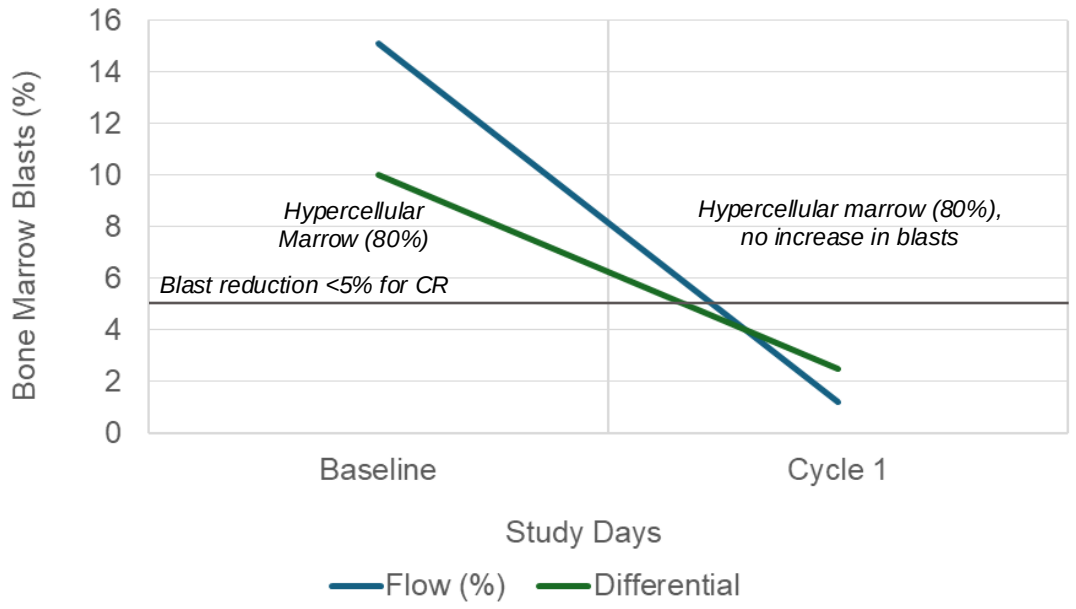
26F with adverse-risk R/R AML (MDS related gene mutations) relapsed after intensive chemotherapy and prior HCT

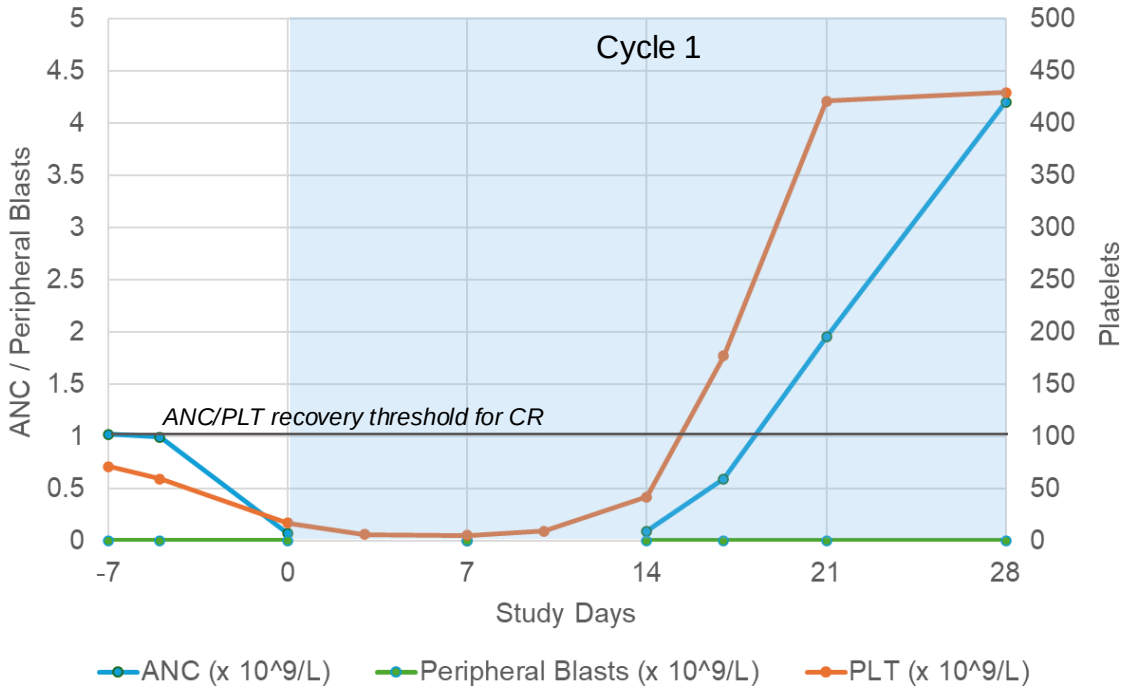
- SENTI-202 well tolerated with no DLT/ AEI
- AEs include G4 hematologic toxicity consistent with lymphodepletion that resolved with AML response, and G3 infections
- Patient continues in CR with ~ 2 months follow up

ANC: Absolute Neutrophil Count; PLT: Platelet Count
Data from an open clinical database of an ongoing study and PI/ site communication as of 19Sep2024

SENTI-202-101 – Patient 2

Second Patient with MRD- CR by MRD flow cytometry after 1 cycle





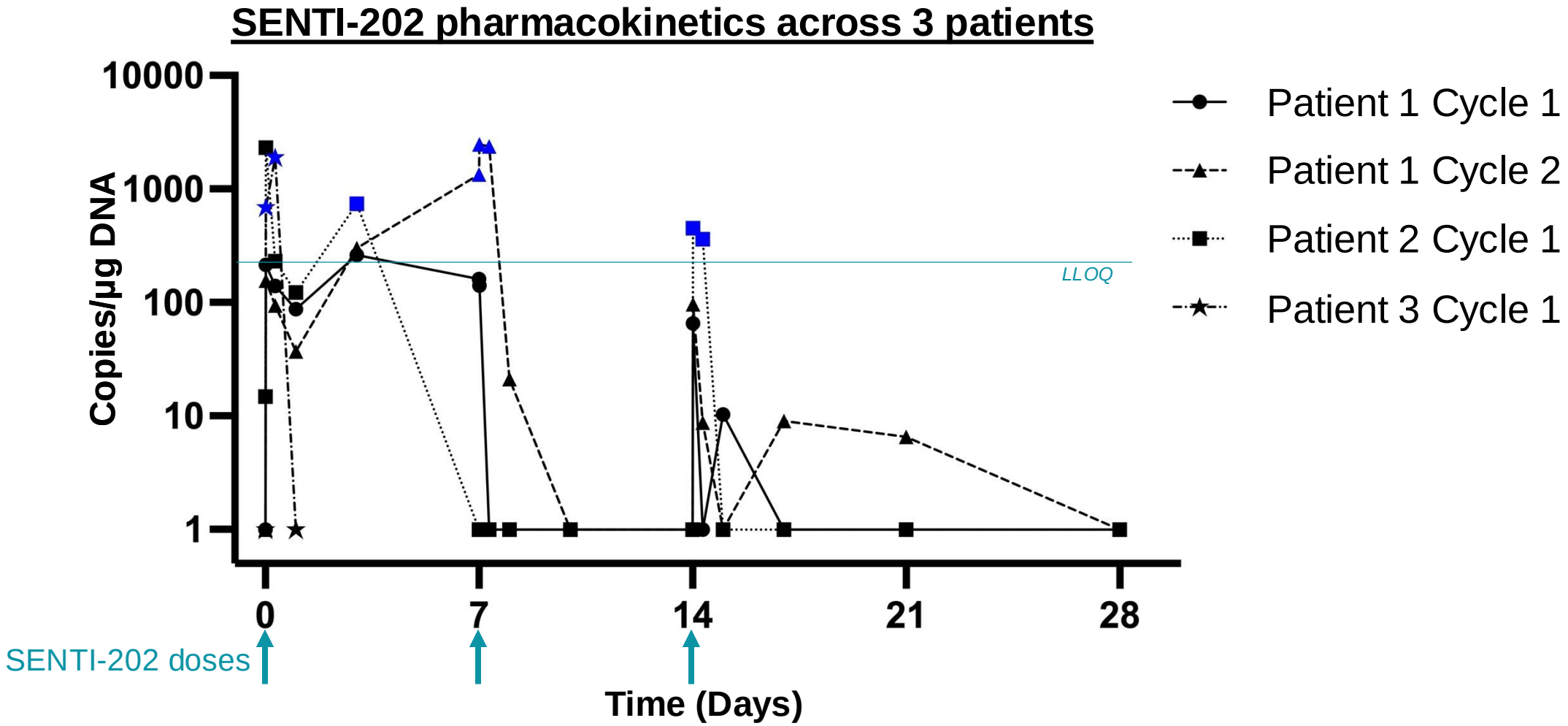
72M with FLT3 mutated (intermediate risk) R/R AML that relapsed after intensive chemotherapy and FLT3 inhibitor

- SENTI-202 well tolerated with no DLT/ SAEs
- AEs include G4 hematologic toxicity consistent with lymphodepletion that resolved with AML response, and G2 fever (CRS) that resolved with supportive care
- Patient is currently receiving a second cycle as consolidation therapy

ANC: Absolute Neutrophil Count; PLT: Platelet Count
Data from an open clinical database of an ongoing study and PI/ site communication as of 19Sep2024

SENTI-202 Initial Correlative Data

SENTI-202 is detected in the peripheral blood across all patients



Interim data as of 19 Sep2024
Nominal value of 1 assigned for timepoints with non-measurable transgene
LLOQ extrapolated from copies/ reaction and is the lower limit of quantitation

SENTI-202 Mechanism of Action and Early Clinical Results are Promising Indicators of a Differentiated Clinical Profile

2024 Accomplishments

- ✓ First patient dosed in 2Q 2024
- ✓ Initial clinical efficacy data by year-end 2024

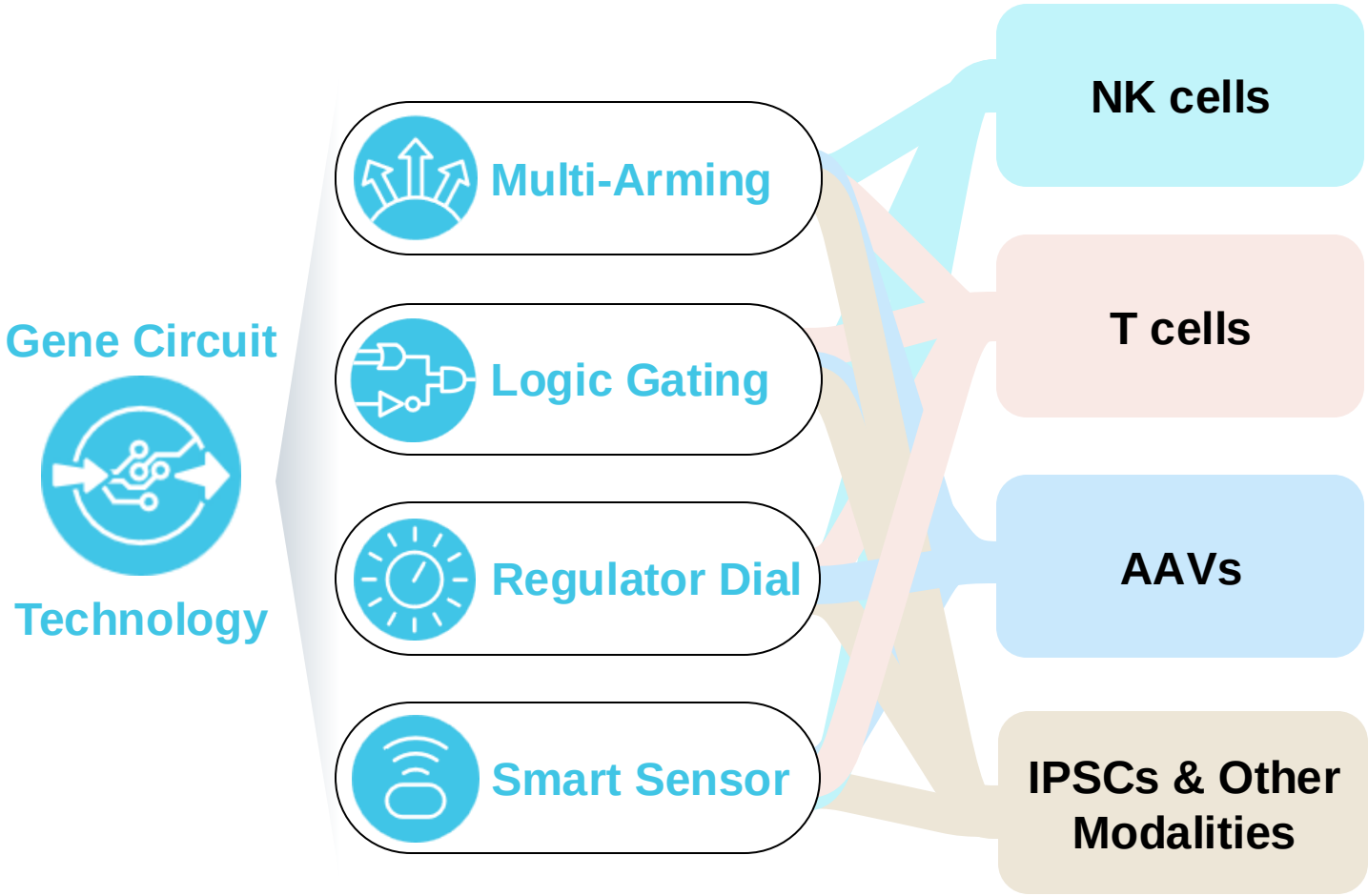
Anticipated Clinical Catalysts

- Durability data in 2025

- Generally well-tolerated at first dose level of 1 billion CAR+ NK cells / dose
- Second dose level of 1.5 billion CAR+ NK cells / dose is actively enrolling
- Early clinical responses in two of three R/R AML patients along with robust count recovery are promising
- SENTI-202 PK generally consistent with allogenic CAR NK therapy with peaks detected post infusion at the first dose level

SENTI-202 is designed to integrate validated mechanisms into one solution, engineered to solve key outstanding problems in AML

Executing Towards Bringing Gene Circuit Medicines to Patients



- ✓ SENTI-202 is a potential first-in-class logic gated CAR-NK program for AML
  - ⇨ Initial cohort data demonstrates evidence of efficacy and safety
- ✓ SENTI-301A first patient expected to be enrolled in China in 4Q 2024
- ✓ Experienced management team with track record of executing on timelines and accelerating innovative therapies
- ✓ Gene Circuit technology has been validated in NK cell, T cell, AAV, and iPSC applications

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SENTI-202 Initial Clinical Data

Q&A