SENTI BIO

Engineering the Future of Cell & Gene Therapies

January 2025

Disclaimer

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These forward-looking statements, including statements regarding attributes and benefits of our technology platform and of our product candidates, including their therapeutic potential; our cash runway; clinical trials, including trial design and endpoints, our ability to achieve such endpoints, our plans to transition our Phase 1 clinical trial of SNTI-202 to a pivotal study, the timing of initial clinical efficacy data and durability data from our ongoing clinical trial; the anticipated timelines and financial elements of our existing collaborations, including statements about Senti Bio’s collaboration with Celest; and our manufacturing process and its potential benefits, reflect our current views about our plans, intentions, expectations, strategies and prospects, which are based on the information currently available to us and on assumptions we have made. 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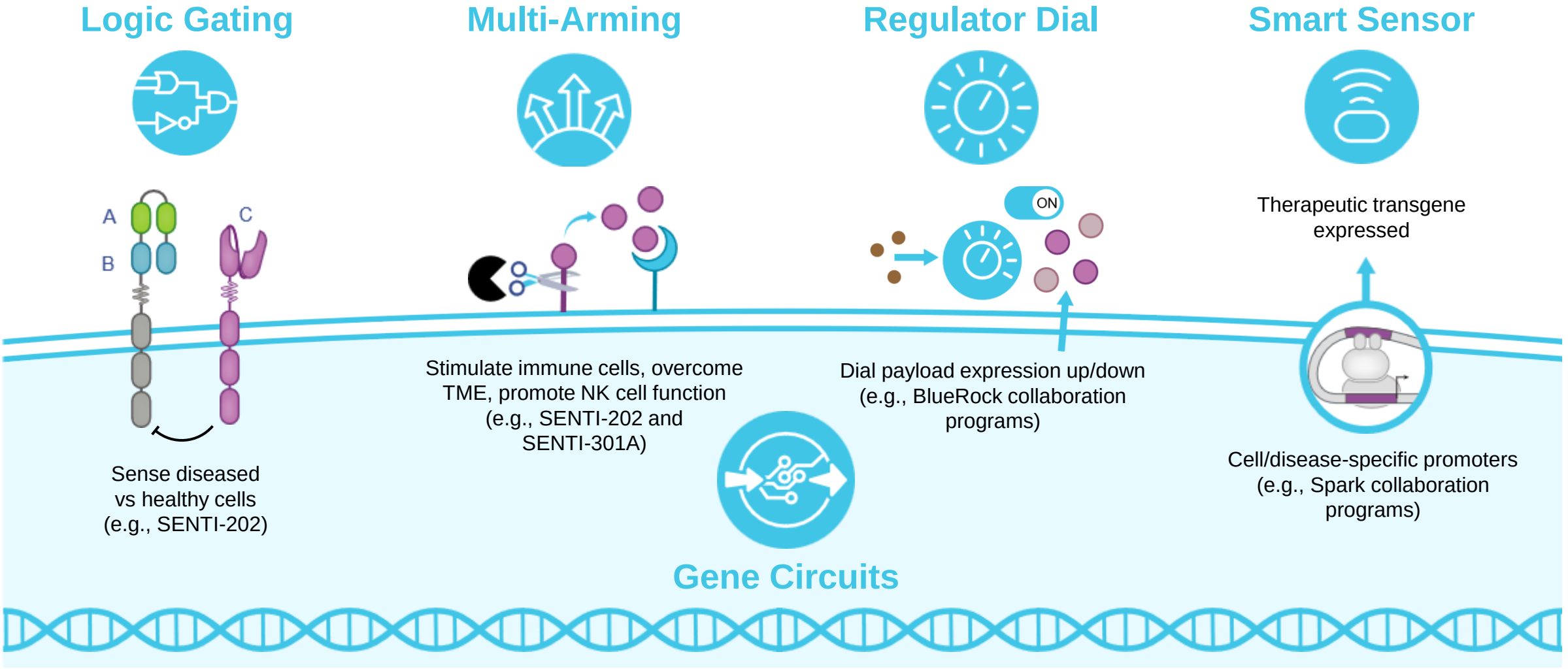
Gene Circuits Enhance Precision, Control, and Activity of Cell & Gene Therapies



TME: tumor microenvironment

Internal Focus on Potential Best-in-Class Oncology Programs, Partnering to Support Non-Oncology Indications

Product Candidates	Target	Application	Preclinical	Early Stage Clinical	Late Stage Clinical	Collaborator
SENTI-202	CD33 and/or FLT3	AML, MDS and other blood cancers				
SENTI-301A/ SN301A[1,2]	GPC3	HCC and other solid tumors				CELEST 晟临生物
Undisclosed	Undisclosed	Solid tumors				
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, Macao, and Taiwan

[2] SN301A utilizes the same Gene Circuit as SENTI-301A and refers to the CAR-NK product manufactured by Celest in China

Industry-Leading Management With Top-Tier Board

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CEO and Co-founder

Yvonne Li
Interim CFO and Treasurer

Kanya Rajangam, MD, PhD
President, Head of R&D and CMO

Rob Cutler, JD
SVP, Head of Legal Affairs

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Scientific Co-Founder, MIT

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Ernst & Young

Donald Tang
Celadon Partners

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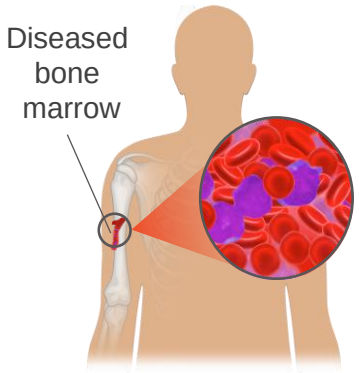
SENTI-202 for Blood Cancers

AML Is an Aggressive Leukemia With Poor Prognosis

AML Estimated Disease Burden

- **20,800 NDAML patients in US every year[1]**
- **~60% NDAML patients experience R/R or death within 12 months[2]**

R/R AML patient outcome



Median survival of 5.3 months[3]

5-year survival rate is 12.6%[3]

- Rapidly progressing myeloid blood cell cancer
- At relapse, ~20-30% CR with full hematologic recovery is reported with targeted agents in patients with FLT3/IDH1/2 mutations[4] or with salvage chemotherapy[3]

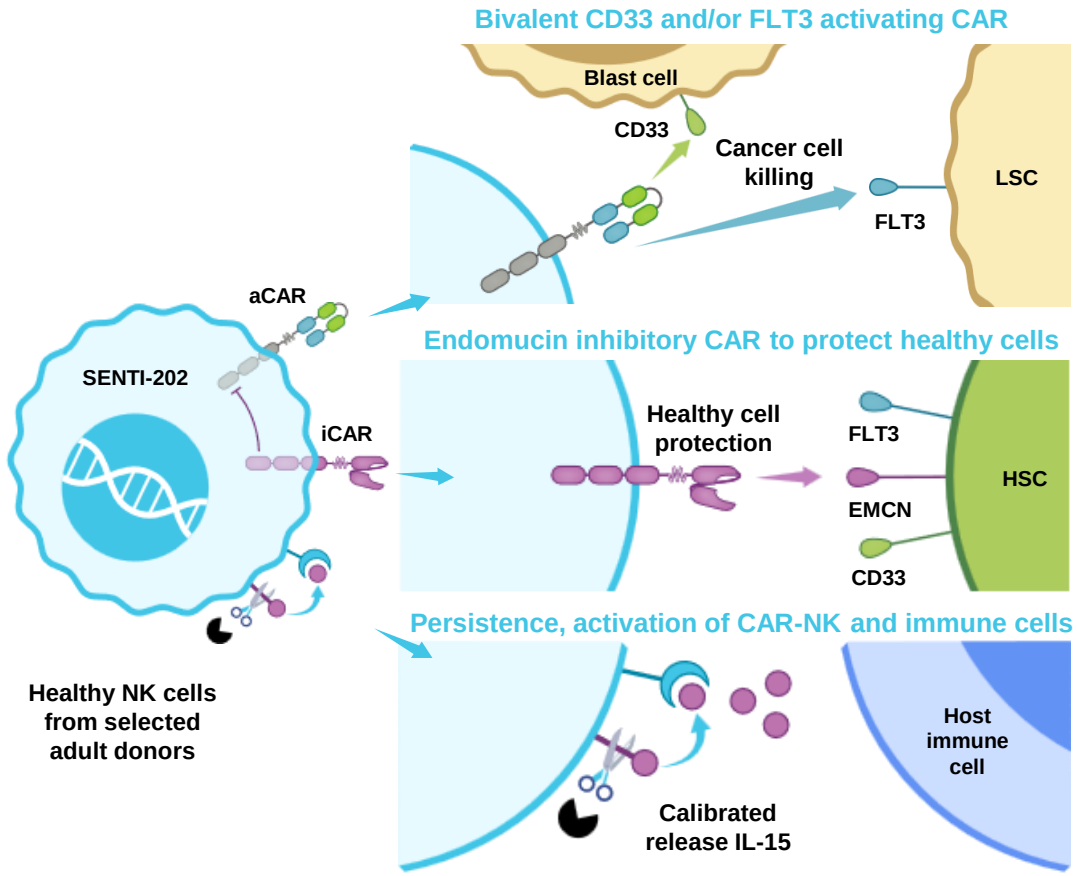
Effective AML Therapies are Needed to

1. Target heterogenous clones / LSCs[5]
   - Achieving deep / MRD negative CR
   - Leads to durable remissions / longer survival[4]
2. Selectively kill AML blasts & LSCs, spare HSCs
   - Robust blood count recovery
   - Improves prognosis / longer survival[6]

R/R: relapsed or refractory; CR: complete remission; HSC: hematopoietic stem cell; LSC: leukemic stem cell; MRD: measurable residual disease; NDAML: newly diagnosed AML

[1] SEER 2024; [2] Tenold Frontiers in Oncology 2021; [3] Brandwein AJBR 2020; [4] Dohner Blood 2022; [5] Zeijlemaker Leukemia 2019; [6] Innes Blood 2018

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



SENTI-202 Approach

- **OR Logic Gate** overcomes AML heterogeneity by killing leukemia blasts and LSCs via an activating CAR (aCAR) that recognizes clinically validated CD33 and/or FLT3 targets
- **NOT Logic Gate** protects healthy HSC/HSPC from killing via an inhibitory CAR (iCAR) that recognizes cell surface EMCN on healthy cells
- **Calibrated release IL-15** increases SENTI-202 and host immune cell activation and persistence

2024 Accomplishments[1]

- Promising initial clinical data at first dose level and schedule
  - **2 of 3 R/R AML patients with CR**
  - **2/2 CRs MRD negative with 4+ and 3+ month durability**

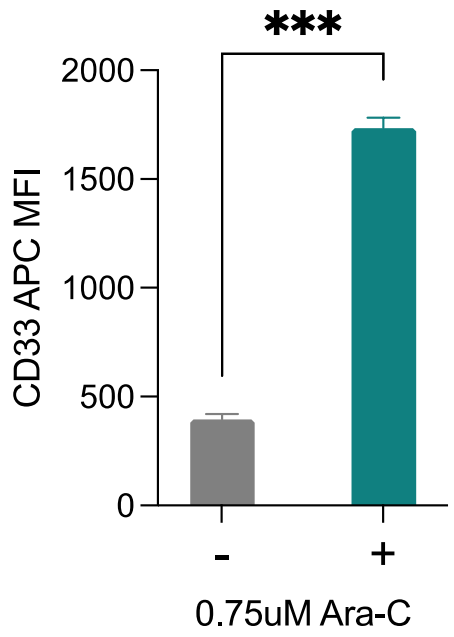
SENTI-202 is designed to integrate validated mechanisms into one solution, engineered to solve key outstanding problems in AML

CR: complete remission; EMCN: endomucin; HSC: hematopoietic stem cell; LSC: leukemic stem cell; MRD: measurable residual disease

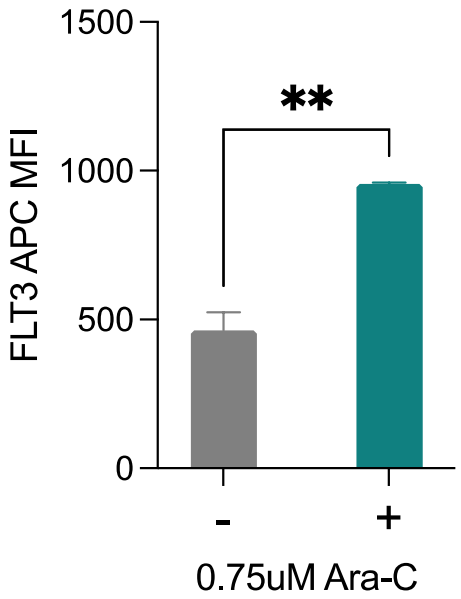
[1] For all SENTI-202 clinical data referenced herein, see the Company's press release dated as of December 2, 2024 and its 8-K filed with the Securities and Exchange Commission (SEC) on December 3, 2024

SENTI-202 Clinical Trial Lymphodepleting Chemotherapy (Ara-C) Sensitizes Low CD33/FLT3 Expressing AML Cell Line to SENTI-202

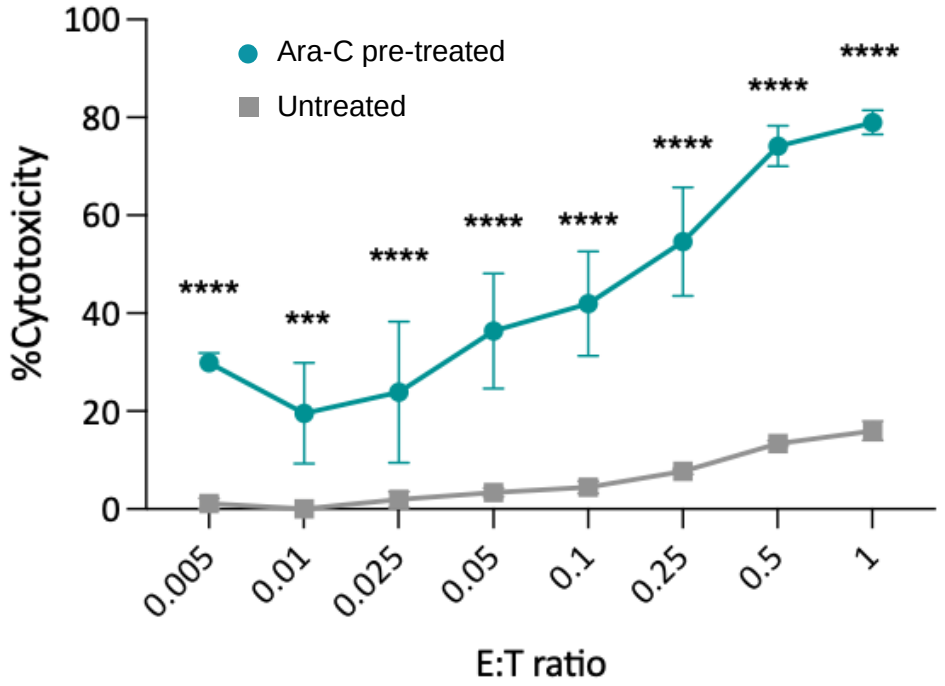
CD33 Expression



FLT3 Expression



Enhanced In vitro Cytotoxicity



- In the CD33 low/FLT3 low KG-1a cell line, 72h Ara-C treatment significantly upregulated CD33 and FLT3 MFI
- Ara-C pre-treated KG-1a cells are sensitized to SENTI-202-mediated cytotoxicity

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

A multicenter, multinational, open-label study

Patient Population

- Adult patients
- R/R CD33 and/or FLT3 expressing heme malignancies including AML/MDS
- Received 1-3[2] prior AML treatments including targeted agents if applicable

Study Design

- "3+3" study design
- Dose escalation followed by disease-specific expansion cohorts AML and MDS
- Two dose levels, two dose schedules[3]
- Plans to transition from Phase 1 to pivotal study

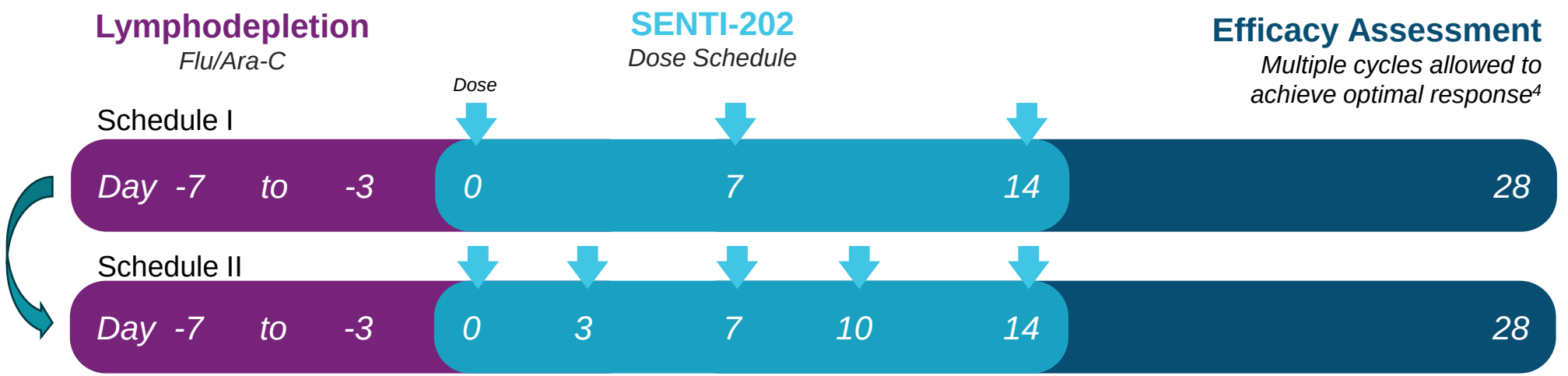
Key Endpoints

- Safety, DLT, identify RP2D
- Efficacy, including bone marrow recovery and MRD
- Pharmacokinetics, pharmacodynamics, CyTOF

Multi-Dose Cycle

SENTI-202 Dose

Dose Level	CAR+ NK Cells/Dose
1	1 x 10^9
2	1.5 x 10^9



DLT: dose limiting toxicity; MRD: measurable residual disease; R/R: relapsed refractory; RP2D: recommended phase 2 dose

[1] NCT06325748; [2] 1-2 prior for MDS; [3] Other dose levels and schedules may be evaluated based on study data; [4] Subjects in MRD negative complete remission may receive one additional cycle as consolidation

SENTI-202-101 Clinical Study Program Overview

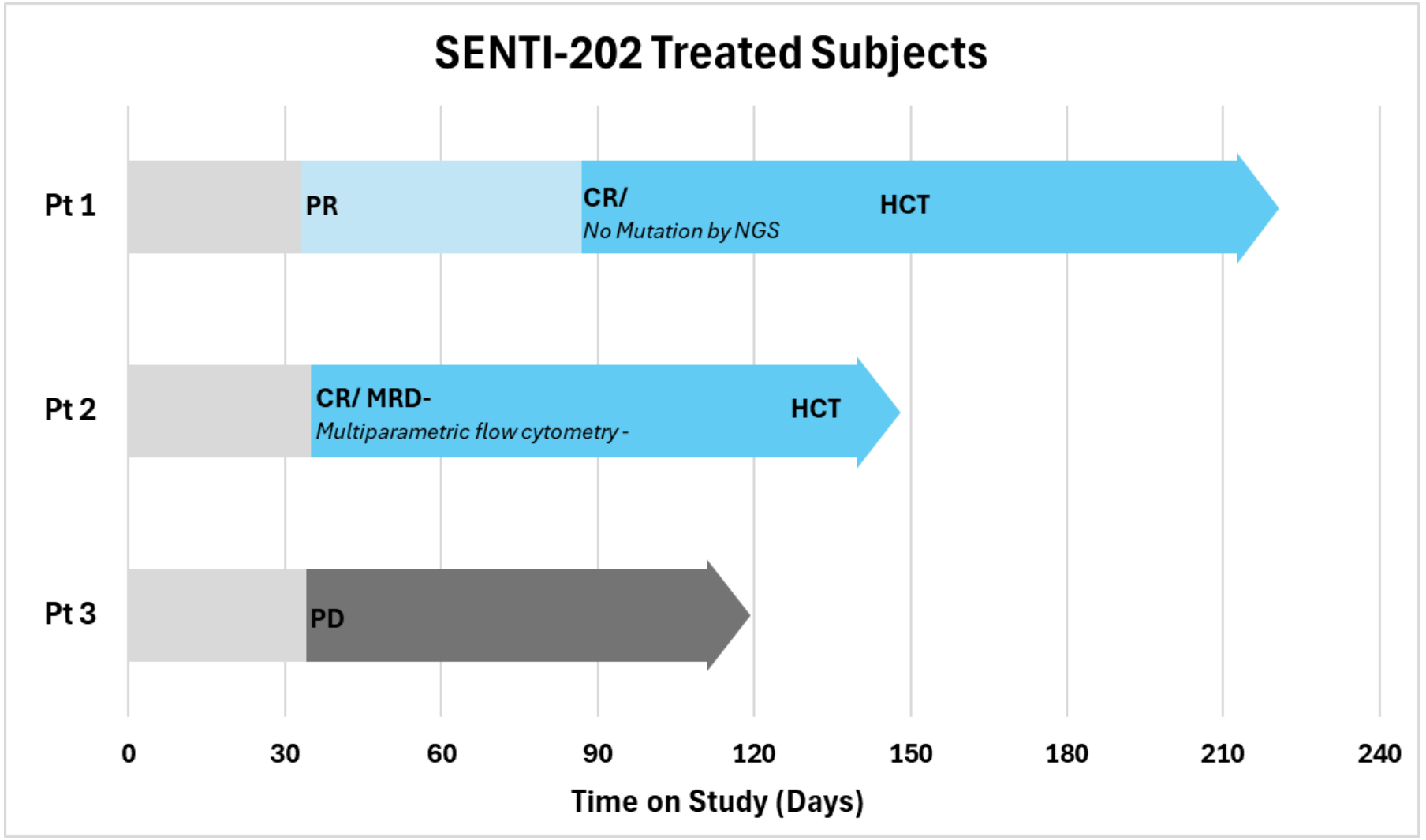
Early efficacy signals noted at the first dose level

- Enrollment
  - Dose level 1 ($1x10^9$ CAR+ NK cells/dose) cleared: 3 R/R AML patients enrolled
  - Dose finding is continuing
- 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 $1x10^9$ CAR+ NK cells/dose patients

For all SENTI-202 clinical data referenced herein, see the Company's press release dated as of 12/2/2024 and its 8-K filed with the SEC on 12/3/2024

SENTI-202-101 Time on Study

Both CR patients continued in CR at 4+ and 3+ months, respectively[1]

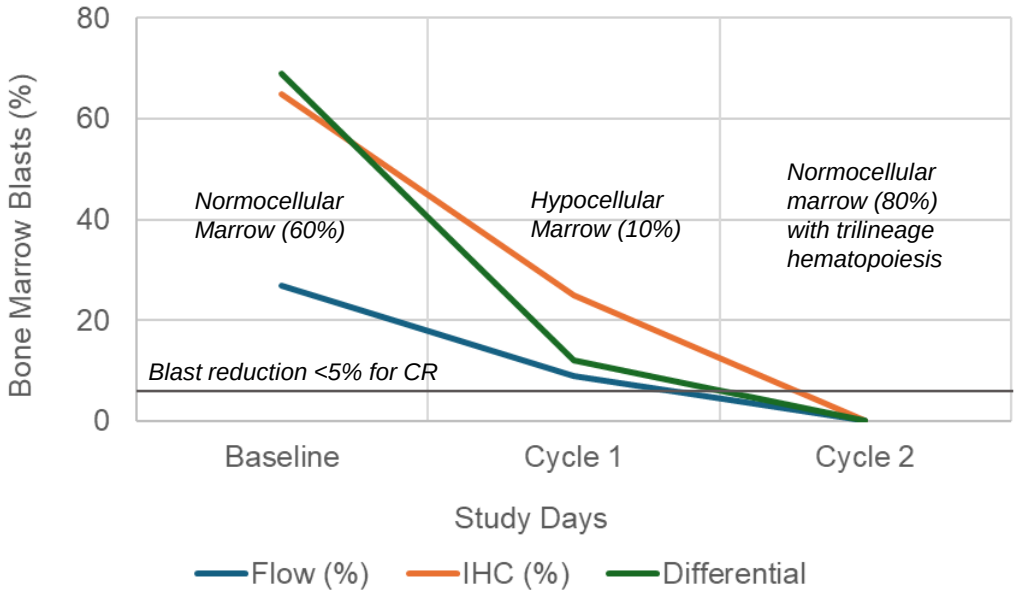


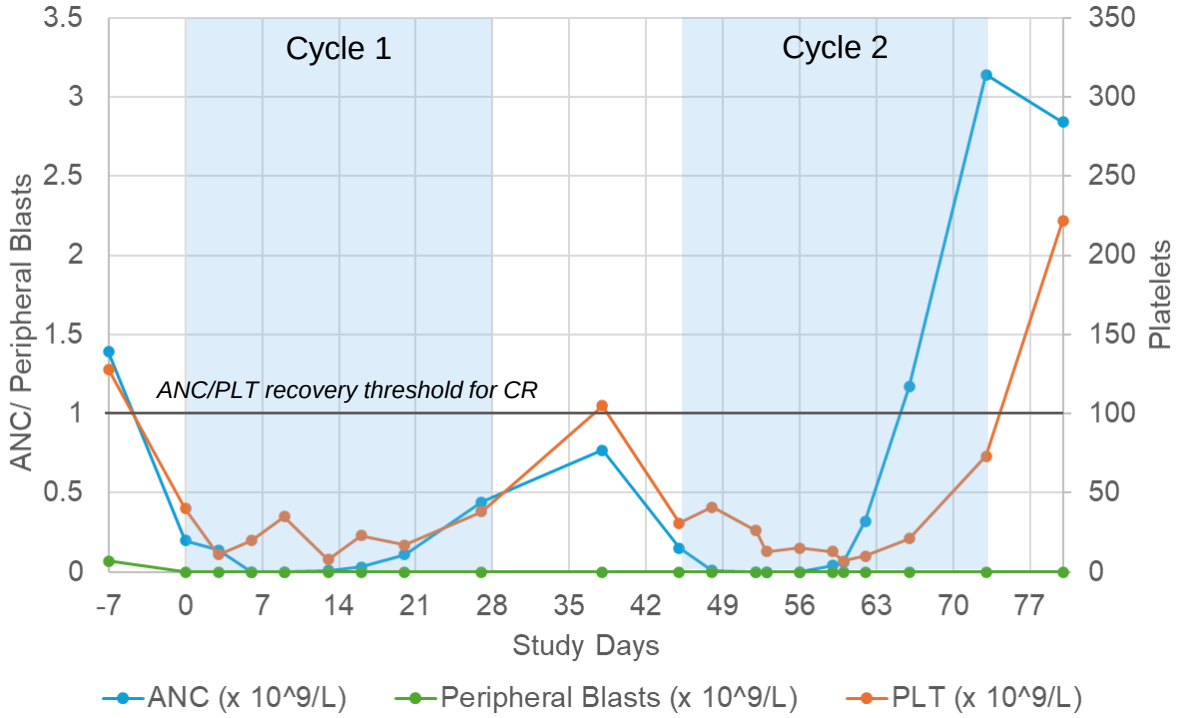
For all SENTI-202 clinical data referenced herein, see the Company's press release dated as of 12/2/2024 and its 8-K filed with the SEC on 12/3/2024

HCT: hematopoietic cell transplantation; MRD: measurable residual disease; NGS: next-generation sequencing

SENTI-202-101 – Patient 1

First Patient with CR after 2 cycles and clearance of all AML mutations by NGS – continued in CR at 4+ months





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

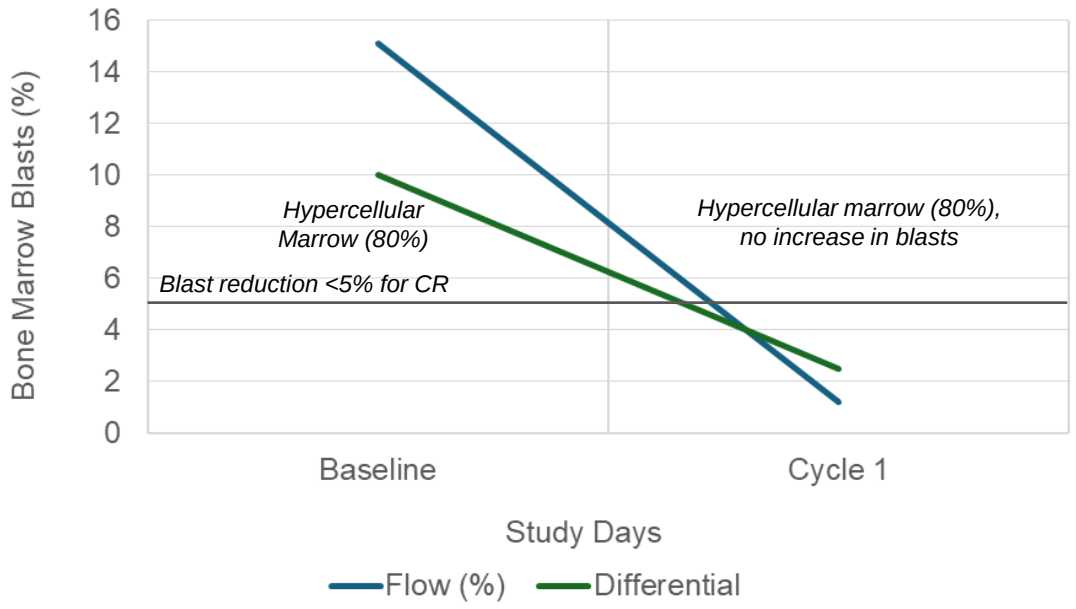
- SENTI-202 well tolerated with no DLT/ AEI
- AEs include G4 hematologic toxicity consistent with lymphodepletion that resolved with AML response, and G3 infections

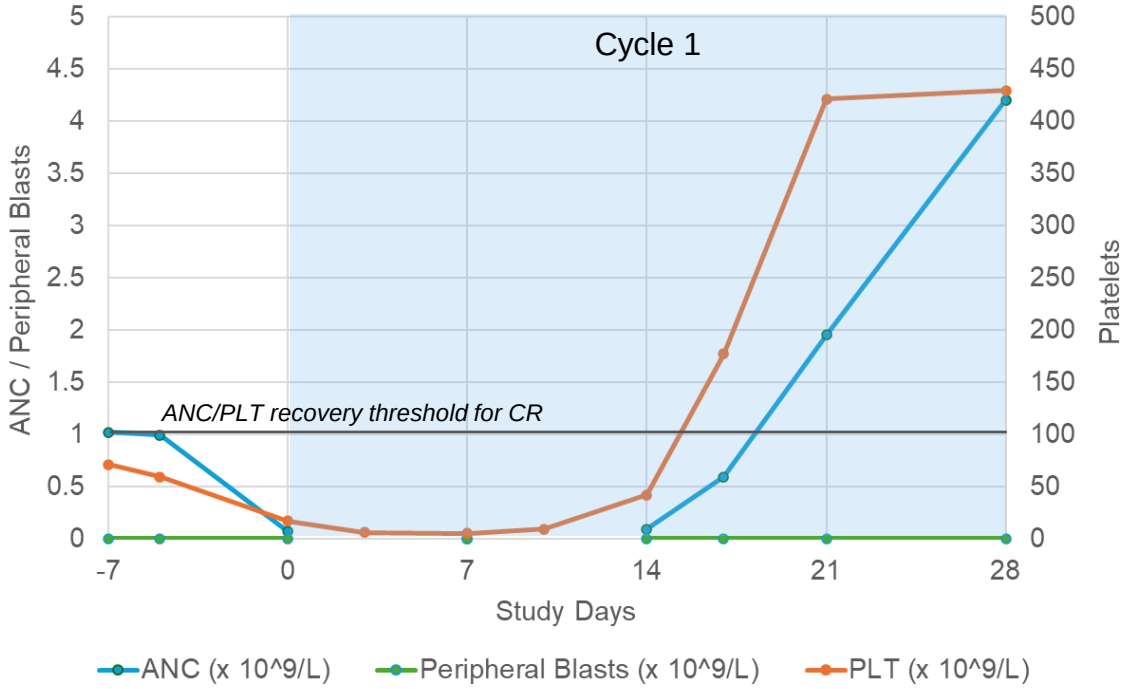
For all SENTI-202 clinical data referenced herein, see the Company's press release dated as of 12/2/2024 and its 8-K filed with the SEC on 12/3/2024

ANC: absolute neutrophil count; PLT: platelet count

SENTI-202-101 – Patient 2

Second Patient with MRD- CR by MRD flow cytometry after 1 cycle – continued in CR at 3+ months





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

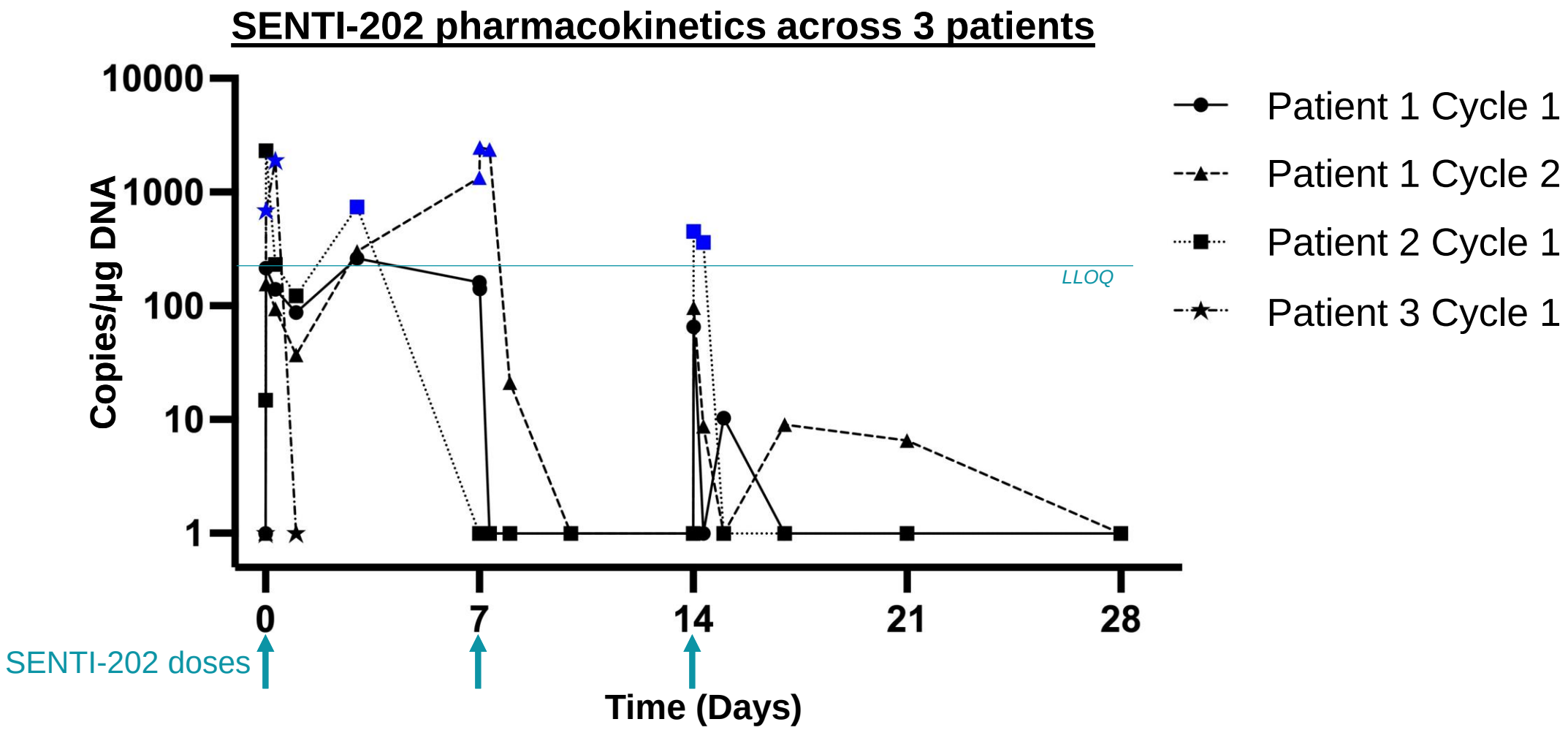
- SENTI-202 well tolerated with no DLT/ SAEs
- AEs include G4 hematologic toxicity consistent with lymphodepletion that resolved with AML response, and G2 fever (CRS) that resolved with supportive care
- Patient received a second cycle as consolidation therapy

For all SENTI-202 clinical data referenced herein, see the Company's press release dated as of 12/2/2024 and its 8-K filed with the SEC on 12/3/2024

ANC: absolute neutrophil count; PLT: platelet count

SENTI-202 Initial Correlative Data

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



For all SENTI-202 clinical data referenced herein, see the Company's press release dated as of 12/2/2024 and its 8-K filed with the SEC on 12/3/2024

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

- Positive initial clinical efficacy data in 2024

Anticipated Clinical Catalysts

- Additional efficacy and durability data expected in 2025

- Well-tolerated at dose schedule 1, $1x10^9$ CAR+ NK cells/ dose
- MRD negative CR in two of three R/R AML patients along with recovery of blood cells to normal ranges with remissions continuing 4+ and 3+ months, respectively[1]
- SENTI-202 PK generally consistent with allogeneic 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 with Senti's Gene Circuits

For all SENTI-202 clinical data referenced herein, see the Company's press release dated as of 12/2/2024 and its 8-K filed with the SEC on 12/3/2024

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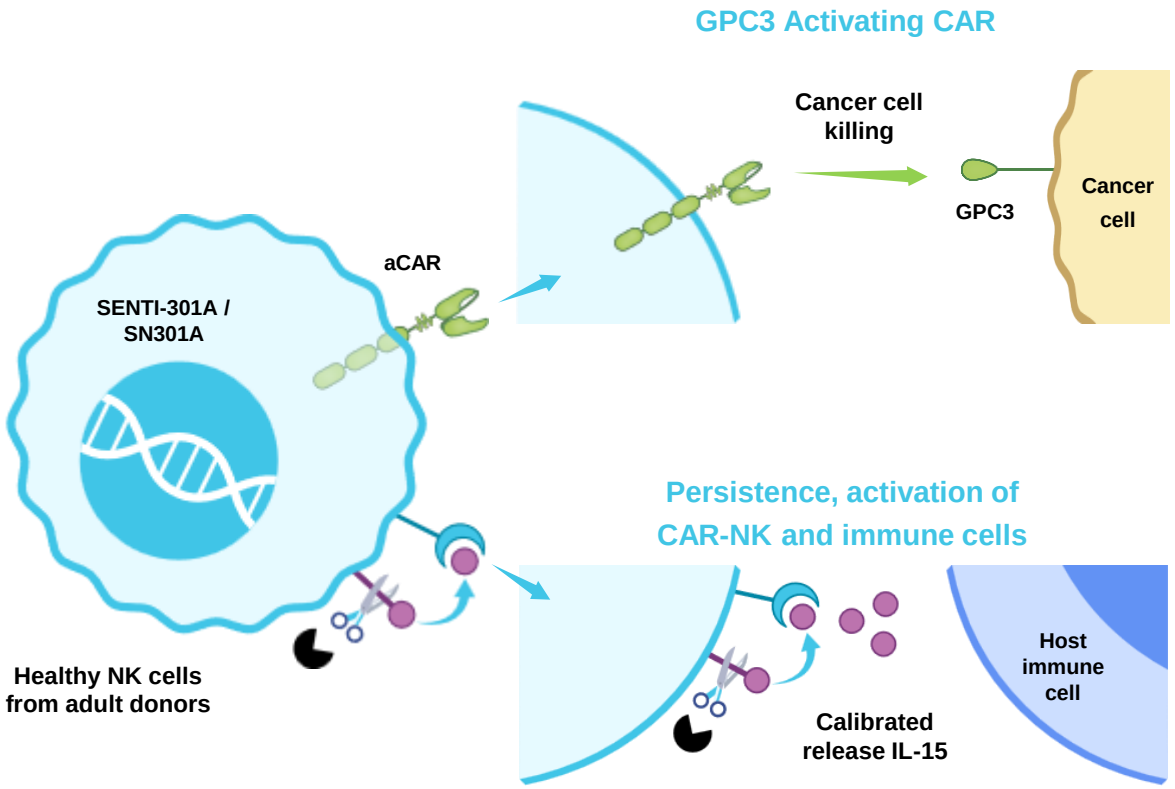
SENTI-301A / SN301A

SENTI-301A Aims to Address Unmet Needs in Solid Tumors With a Focus on HCC



Activating CAR "kill" signal

- GPC3 for hepatocellular carcinoma (HCC) and other solid tumors

Calibrated release IL-15

- Potential for increased cell expansion, persistence, and tumor killing

Strategic collaboration with Celest Therapeutics for clinical development of SN301A[1] to treat solid tumors in China, starting with HCC

[1] SN301A utilizes the same Gene Circuit as SENTI-301A and refers to the CAR-NK product manufactured by Celest in China

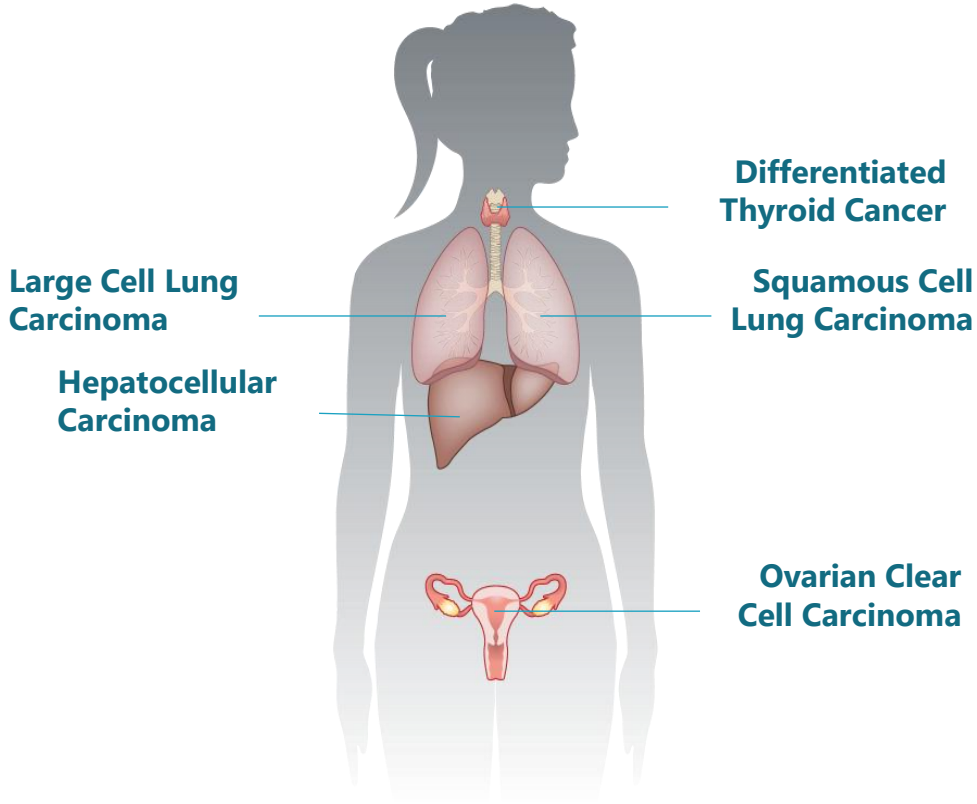
SENTI-301A Is Designed to Tackle GPC3+ Expressing Solid Tumors

GPC3 is expressed in multiple solid tumors

- HCC (70-90% GPC3+)[1] and other solid tumors – lung, ovarian, thyroid (29-54%[2] GPC3+)
- Phase 1 GPC3 autologous CAR-T cell trials have shown promising activity along with classic CAR-T toxicities[2,3,4]

SENTI-301A is designed to target GPC3+ tumors

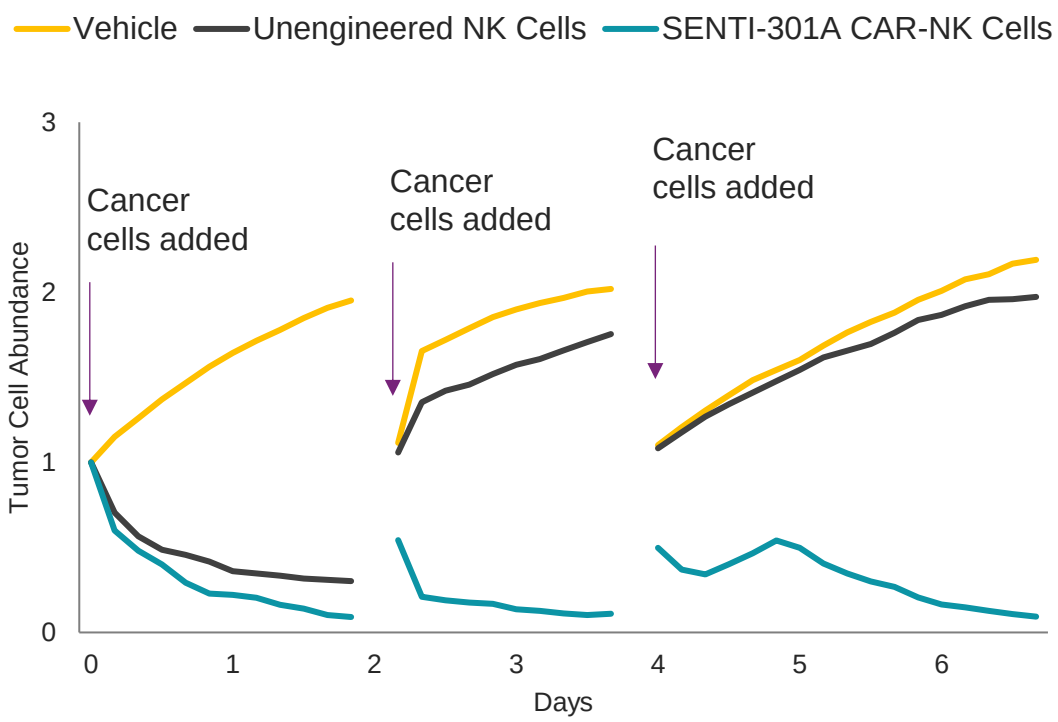
- Tackle multiple solid tumors with high GPC3 antigen expression via NKs multi-armed with GPC3 CAR and crIL-15

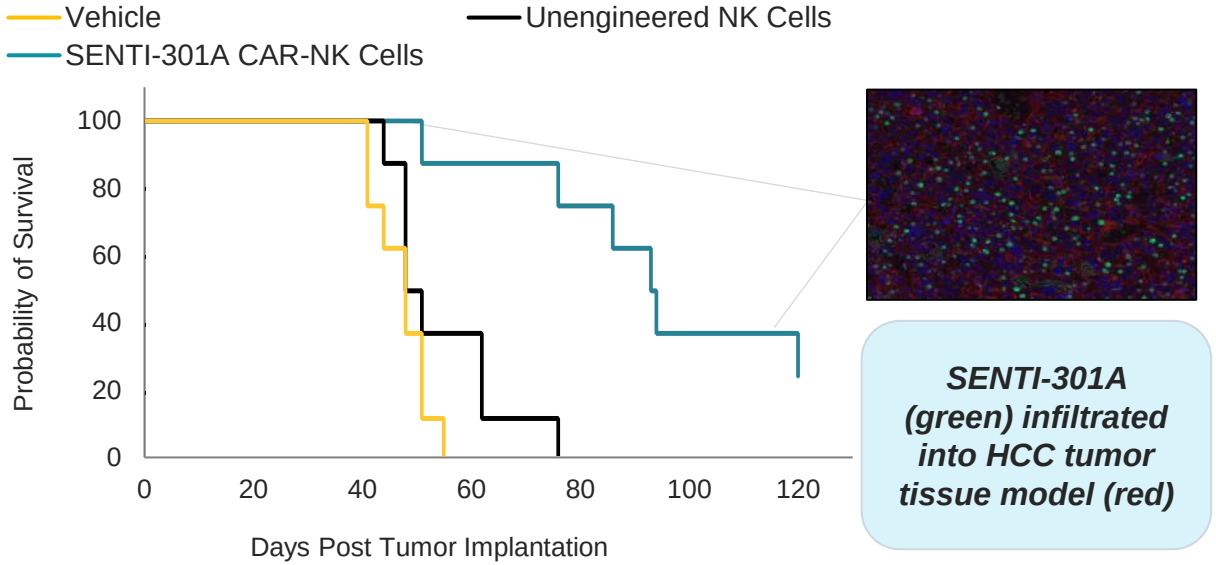


Common GPC3 expressing tumors

[1] Zheng Frontiers in Oncology 2022; [2] Moek American Journal of Pathology 2018; [3] Shi Clinical Cancer Research 2020; [4] Zhang JCO 2024

SENTI-301A Has Shown Robust Preclinical Activity in Liver Cancer Models





SENTI-301A (green) infiltrated into HCC tumor tissue model (red)

Group	Vehicle	Unengineered NK Cells	SENTI-301A CAR-NK Cells
Median Survival (Days)	48	49.5	93.5

Effective in vitro serial killing of HepG2 cell line

Increased survival, tumor infiltration and response in HepG2 mouse model

SN301A Clinical Trial Design[1,2]

Patient Population

- Adult patients
- Advanced GPC3-positive Hepatocellular Carcinoma
- Unresectable stage B or C (per BCLC)
- Failed at least 1 prior line, including PD1/L1 & TKIs

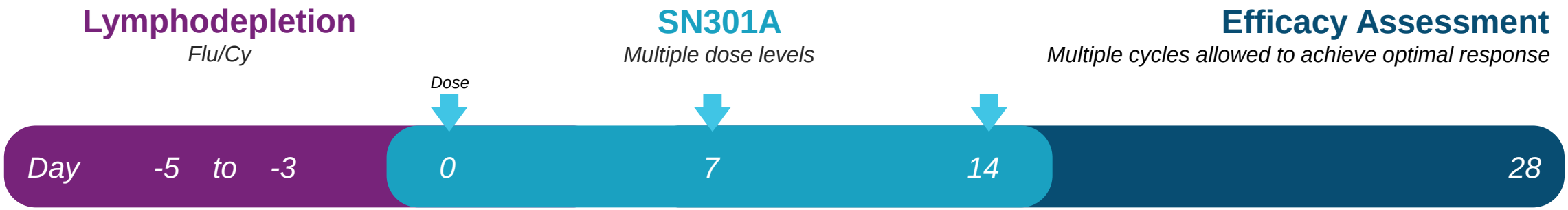
Study Design

- “3+3” study design
- Dose escalation followed by expansion cohort
- Opportunity to transition to US clinical study

Key Endpoints

- Safety, DLT, recommended Phase 2 dose
- Efficacy, using RECIST v1.1, mRECIST & iRECIST criteria
- Pharmacokinetics, pharmacodynamics

Multi-Dose Cycle



BCLC: Barcelona Clinic Liver Cancer; DLT: dose limiting toxicity; GPC3: glypican-3; RP2D: recommended phase 2 dose; TKI: tyrosine kinase inhibitors

[1] NCT06652243; [2] SN301A utilizes the same Gene Circuit as SENTI-301A and refers to the CAR-NK product manufactured by Celest in China

Collaboration with Celest Therapeutics to Develop SENTI-301A for HCC in China

Key Transaction Terms

- Up to $156 million in milestones and potential tiered royalties post-commercialization
- Clinical trial in mainland China, first patient dosed 4Q 2024
- Potential to expand into Hong Kong, Macao, and Taiwan, with Senti retaining all commercialization rights outside of those regions and mainland China

Dose-finding trial design, with multiple dose levels

Up to 10 patients with advanced GPC3 expressing liver cancer (HCC)

Clinical trial includes safety and efficacy endpoints

~370,000 new cases of liver cancer in China in 2022, which was over 40% of all liver cancer cases worldwide[1]

[1] World Cancer Research Fund International

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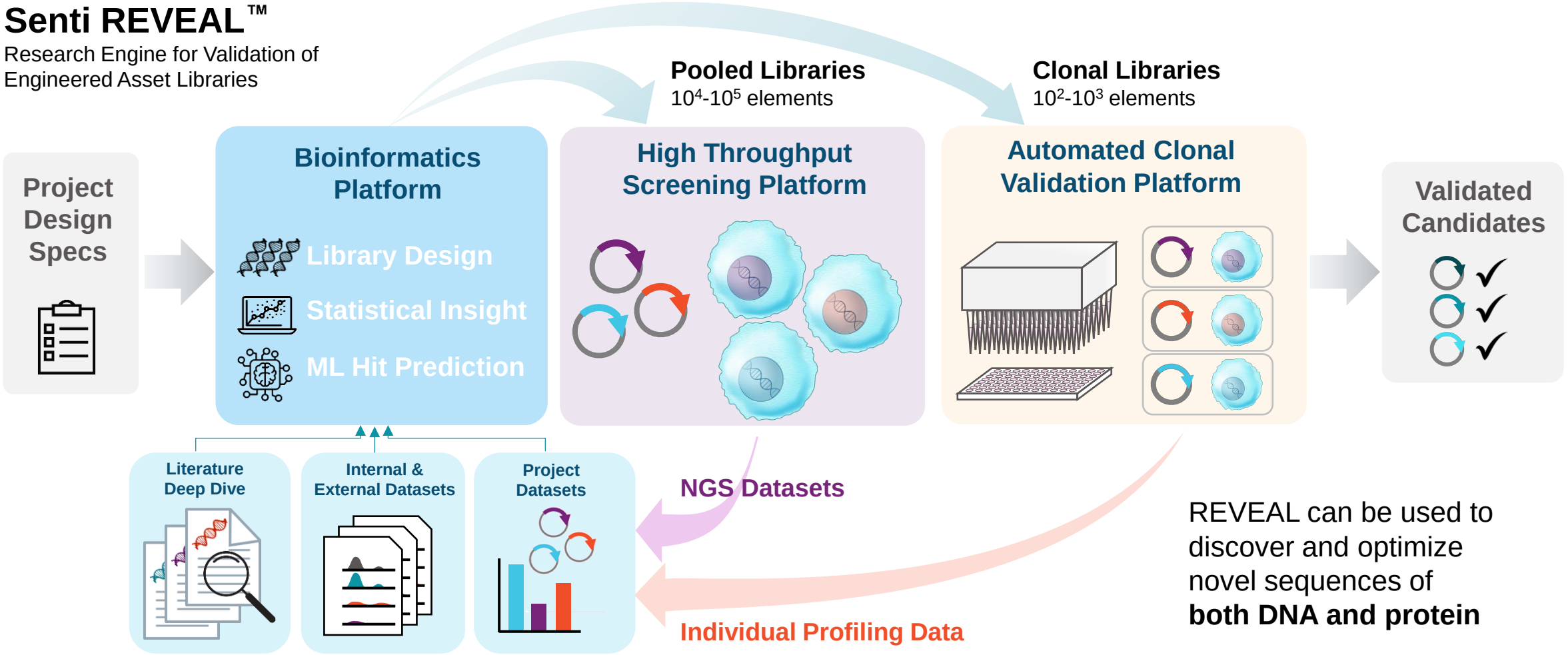
Senti Enabling Technology

Senti's Discovery and Optimization Engine For Novel DNA and Protein Assets

Senti REVEAL™

Research Engine for Validation of Engineered Asset Libraries



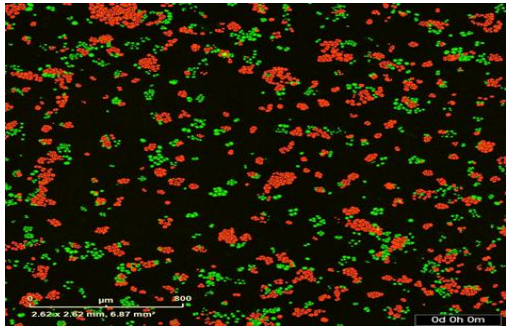
REVEAL can be used to discover and optimize novel sequences of **both DNA and protein**

Senti's REVEAL Platform Enables Rapid Optimization of Highly Potent & Protective Logic Gates in NK Cells for Solid Tumors

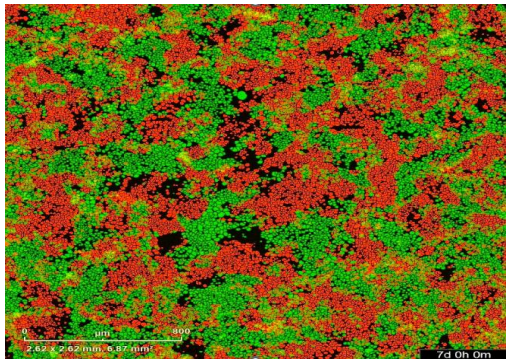
Cancer cells *(VSIG2⁻CEA⁺)*

Model healthy cells *(VSIG2⁺CEA⁺)*

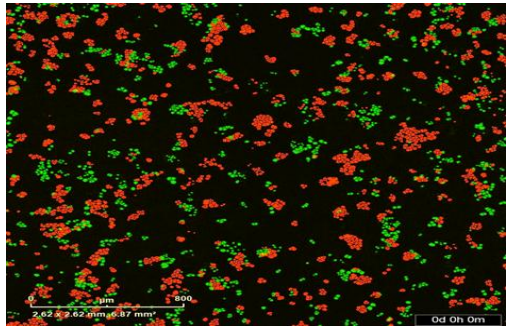
No NK Cells



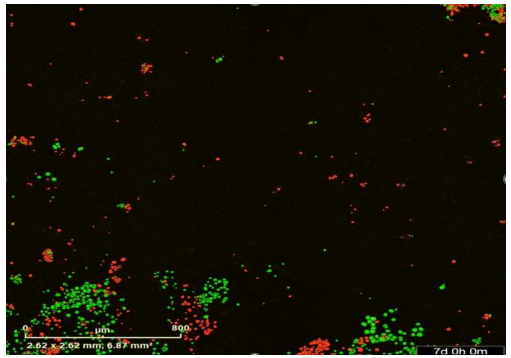
No killing of cancer or healthy cells



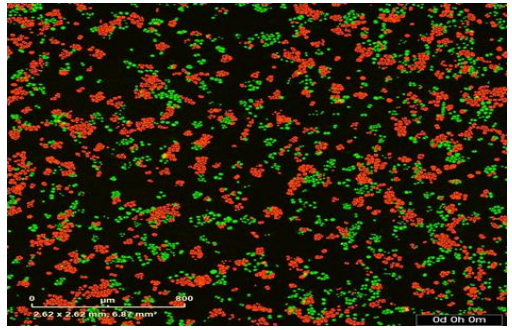
CEA CAR-NK Cells



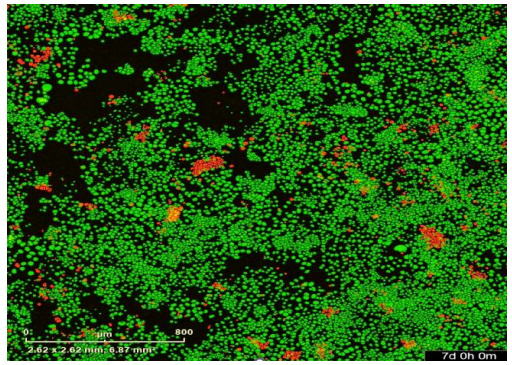
Significant killing of both cancer and healthy cells



CEA NOT VSIG2 CAR-NK Cells



Precise killing of cancer cells while sparing healthy cells



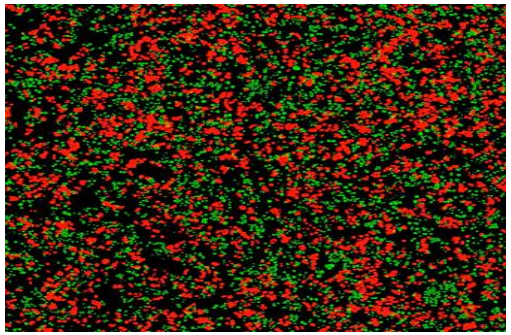
CEA NOT VSIG2 CAR-NK cells spared VSIG2-expressing model healthy cells while maintaining robust on-target, on-tumor killing of CEA+ cancer cells

Senti's REVEAL Platform Enables Rapid Optimization of Highly Potent & Protective Logic Gates in T Cells for Solid Tumors

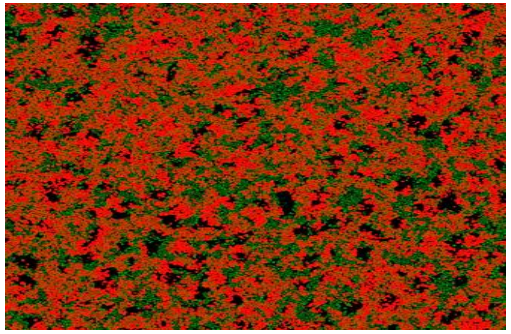
Cancer cells *(VSIG2⁻CEA⁺)*

Model healthy cells *(VSIG2⁺CEA⁺)*

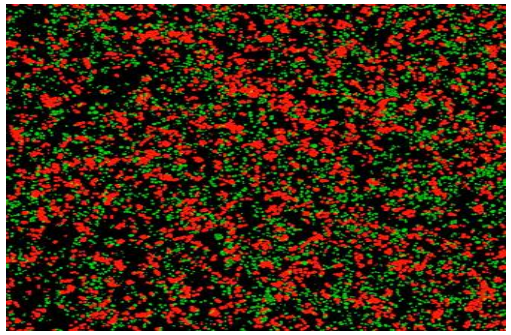
No T Cells



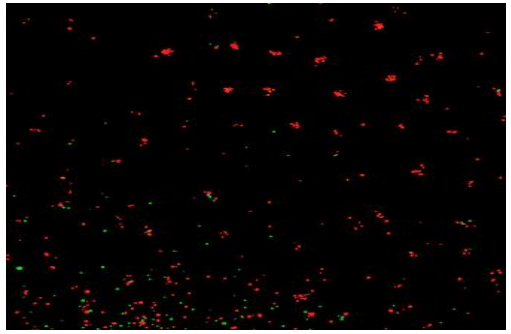
No killing of cancer or healthy cells



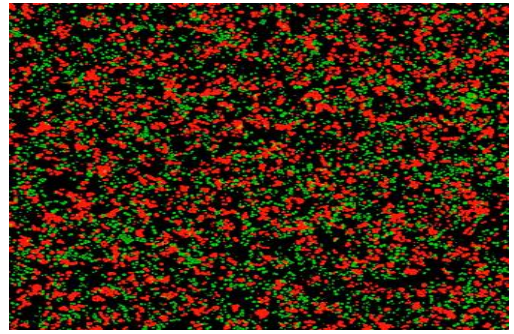
CEA CAR-T Cells



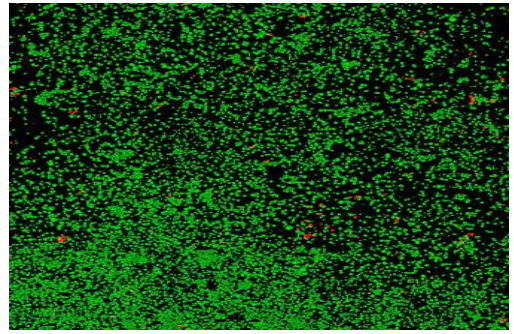
Significant killing of both cancer and healthy cells



CEA NOT VSIG2 CAR-T Cells

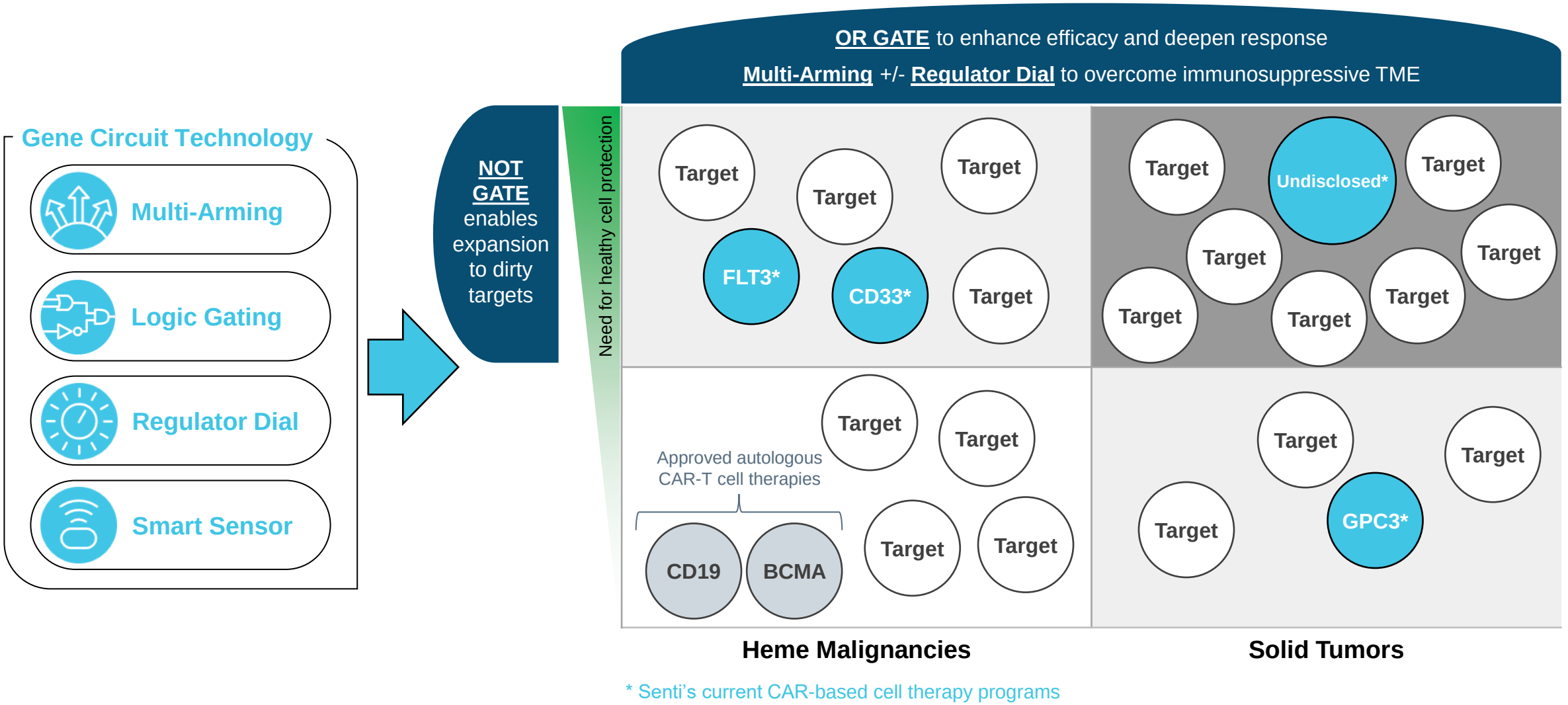


Precise killing of cancer cells while sparing healthy cells

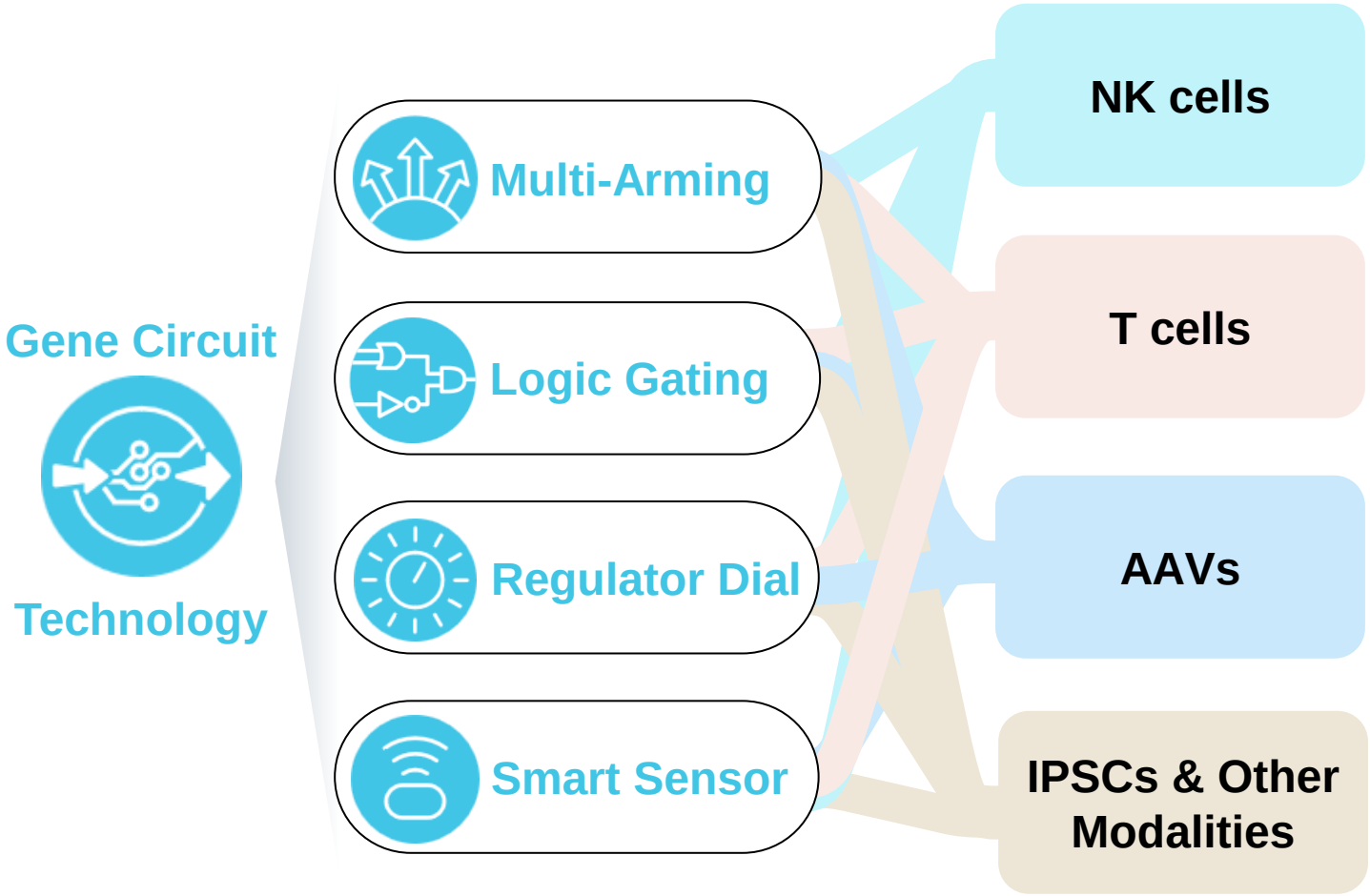


CEA NOT VSIG2 CAR-T cells spared VSIG2-expressing model healthy cells while maintaining robust on-target, on-tumor killing of CEA+ cancer cells

Gene Circuits May Vastly Expand the Universe of Cancer Targets and Tumors That Can Be Addressed With Cell Therapies



Executing Towards Bringing Gene Circuit Medicines to Patients



- SENTI-202 is a first-in-class Logic Gated CAR-NK program for AML
  - Initial cohort data shows promising evidence of efficacy and safety
  - Durability data anticipated 2025
- SN301A first patient dosed 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

SENTI BIO

Thank You!