Abeona THERAPEUTICS

INVESTOR PRESENTATION

Q1 2026 Results and Pipeline Update

May 13, 2026

Forward-Looking Statements

This presentation contains certain statements that are forward-looking within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and that involve risks and uncertainties. We have attempted to identify forward-looking statements by such terminology as “may,” “will,” “believe,” “anticipate,” “expect,” “intend,” “potential,” and similar words and expressions (as well as other words or expressions referencing future events, conditions or circumstances), which constitute and are intended to identify forward-looking statements. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, numerous risks and uncertainties, including but not limited to, our ability to successfully commercialize and market ZEVASKYN, including manufacturing sufficient batches of ZEVASKYN to meet demand; the therapeutic potential of ZEVASKYN; whether the unmet need and market opportunity for ZEVASKYN are consistent with the Company’s expectations; continued interest in our portfolio; our ability to submit an investigational new drug application for ABO-701 and enroll patients in clinical trials; the outcome of future meetings with and inspections by the FDA or other regulatory agencies, including those relating to preclinical programs and to the cGMP manufacturing of ZEVASKYN; the ability to achieve or obtain necessary regulatory approvals for our pre-clinical programs; our ability to execute on our key business priorities; the impact of any changes in the financial markets and global economic conditions, including those resulting from changes to U.S. or other countries’ trade policy, such as current or future tariffs; risks associated with data analysis and reporting; and other risks disclosed in the Company’s most recent Annual Report on Form 10-K and subsequent periodic reports filed with the Securities and Exchange Commission. The Company undertakes no obligation to revise these forward-looking statements or to update them to reflect events or circumstances occurring after the date of this presentation, whether as a result of new information, future developments or otherwise, except as required by the federal securities laws.

Corporate Overview

Vishwas Seshadri, Ph.D., M.B.A.
CHIEF EXECUTIVE OFFICER, DIRECTOR

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ZEVASKYN® Adoption Sets Foundation for Abeona's Growth

zevaskyn®
(prademagene zamikeracel)
gene-modified cellular sheets

- **Six Qualified Treatment Centers** activated
- **Three patients treated** in the first quarter
- **Continued growth anticipated** fueled by QTC expansion and positive early ZEVASKYN experiences

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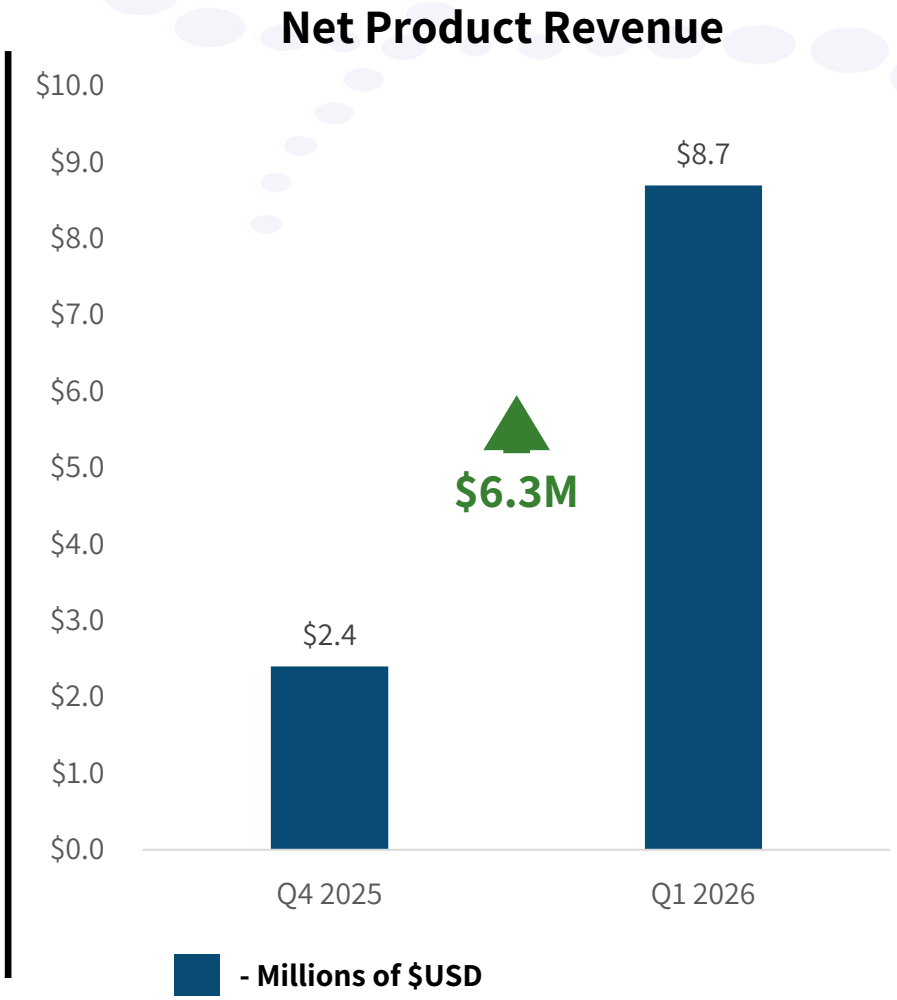
- **Radically novel engineered T-cell therapy** targeting Prostate-Specific Membrane Antigen (PSMA), in-licensed for a $7M upfront payment
- Ophthalmology programs deprioritized



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Commercial Update

Madhav Vasanthavada, Ph.D., M.B.A.
CHIEF COMMERCIAL OFFICER

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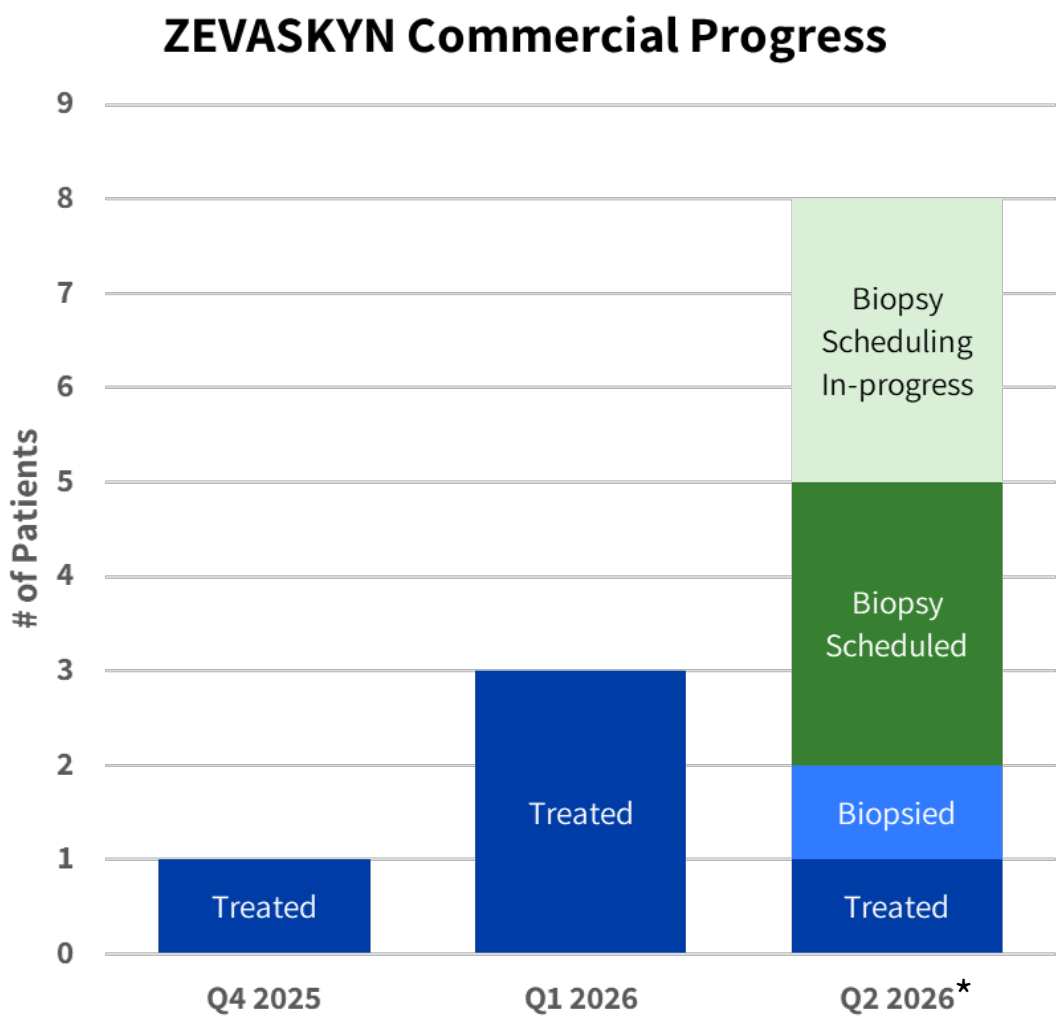
Launch Momentum for ZEVASKYN® Continues to Build



Patients Treated:

- 3 patients treated in the first quarter of 2026
- 1 patient treated so far this quarter

Patients In-queue:

- 1 patient biopsied (manufacturing ongoing)
- 6 additional patients expected to be biopsied this quarter, 3 of whom have biopsies scheduled

Near-term ZEVASKYN potential patients:

- 100+ patients identified to date across QTCs and non-QTC physicians with patient referrals underway

*As of May 13, 2026

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Launch Insights and Data Updates Reinforce Conviction Across Stakeholders

- Patients treated span a wide age range, payor types, and have traveled significant distances, including out-of-state

- Published coverage policies now in place for 95% of commercially insured U.S. lives; no patient attrition and no final payer denials to date

- Data presentation at SID2026 on sustained wound healing and long-term safety after one-time pz-cel application: **12-year case report** and **5-year Phase 3 data**

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Expanded QTC Network Enhances Patient Access

8

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R&D Pipeline Update

Vishwas Seshadri, Ph.D., M.B.A.
CHIEF EXECUTIVE OFFICER, DIRECTOR

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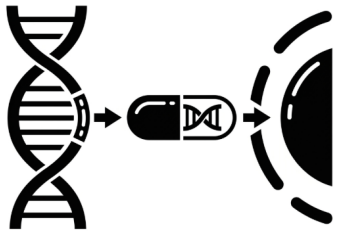
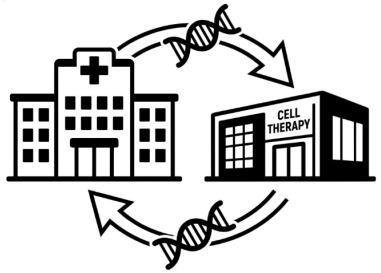
The ZEVASKYN® Story Exemplifies Our Core Competencies



Technical and Regulatory Expertise:

- Tech transfer for manufacturing vectors and cell products
- Clinical development for personalized autologous cell-therapy
- Assay development, bridging and validation at every stage
- BLA review and approval with heavy CMC focus



Cell Therapy Commercial Excellence:

- Activation of QTCs with multidisciplinary care teams
- Securing market access for high-value gene therapies
- Delivering personalized therapy with chain of identity
- Prior oncology experience including in prostate cancer

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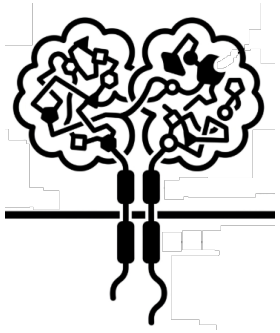
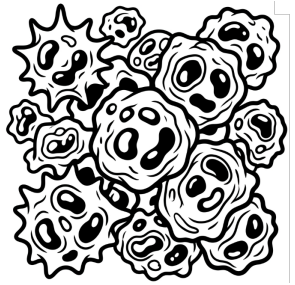
Extending Our Competencies to Combat Advanced Prostate Cancer



- PSMA is a validated target in prostate cancer, but CAR-Ts and other immunotherapies targeting PSMA have failed to deliver durable efficacy and acceptable safety profiles
- PSMA SIR-T™ is a radically novel engineered T-cell technology with the potential to unlock immuno-oncology in prostate cancer
- Global KOLs in prostate cancer are eager to participate in human trials with PSMA SIR-T™



- Advanced prostate cancer claims >30,000 lives in the US annually
- High mortality despite advances (e.g., combinations with androgen receptor pathway inhibitors and radioligand therapies)

Inventor of PSMA SIR-T™ is a Renowned Hematologist & Cell Therapist

Preet M. Chaudhary M.D., Ph.D.

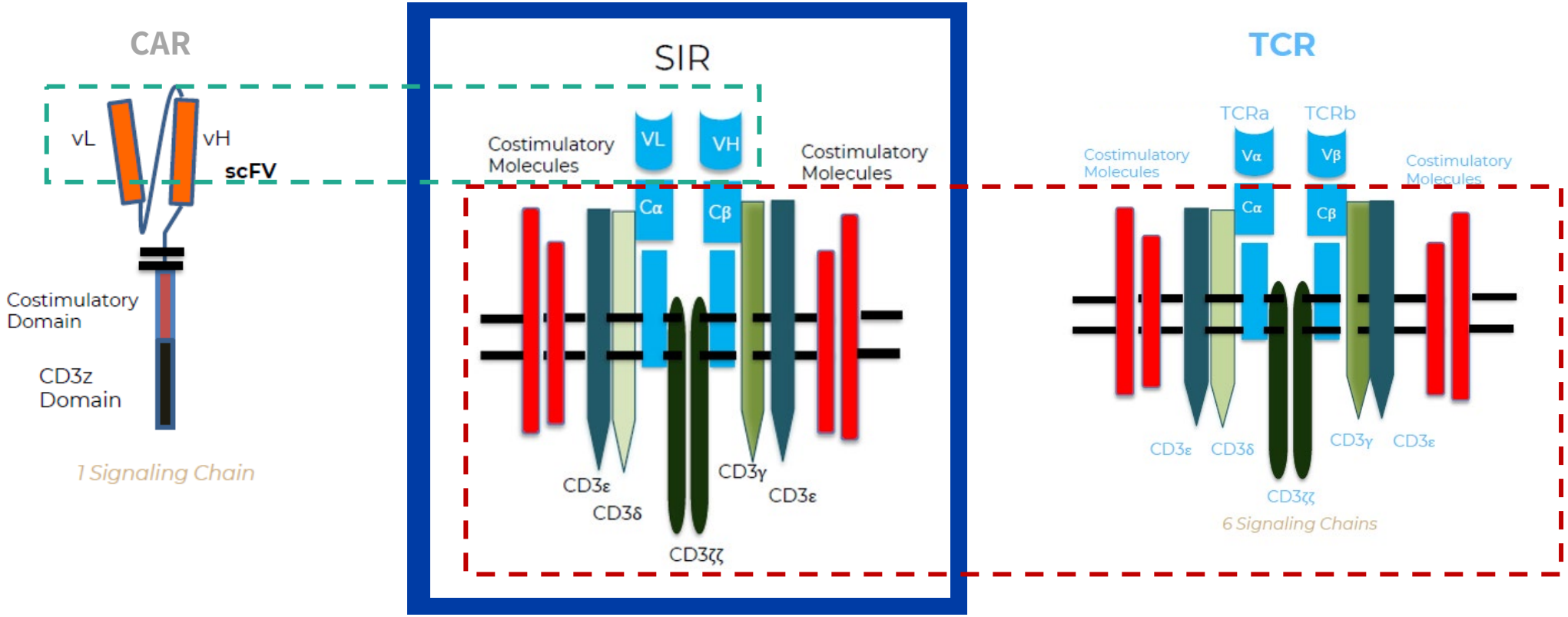
- Professor of Medicine and Chief of Jane Ann Nohl Division of Hematology and Center for the Study of Blood Diseases at University of Southern California (USC) Keck School of Medicine
- Director of USC Blood and Marrow Transplant and Cell Therapy Program
- Ronald Bloom Family Endowed Chair in Lymphoma Research
- 200+ worldwide patents (granted / pending) in the field of cell therapy

Click here to view Dr. Chaudhary's recent talk on SIR-T™ technology

Synthetic Immune Receptor Combines the Best of CAR and TCR

PSMA SIR-T™
(ABO-701)

- **Designed to overcome the fundamental limitations of CARs**
- **Retains the full signaling strength, complexity, and physiological regulation of a TCR**
- **Exceptional in vivo responses vs. CAR T cells in preclinical models, with less inflammatory cytokine release**



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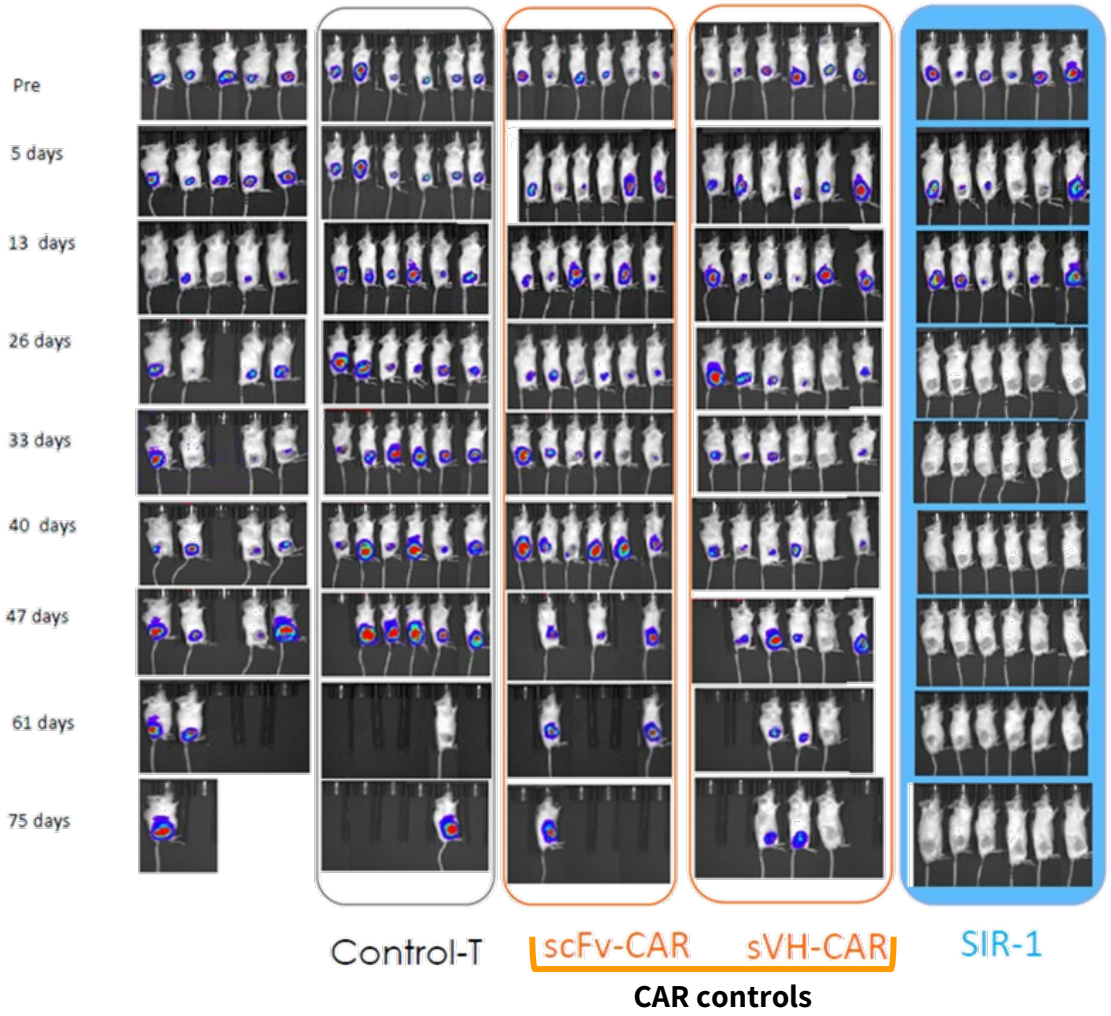
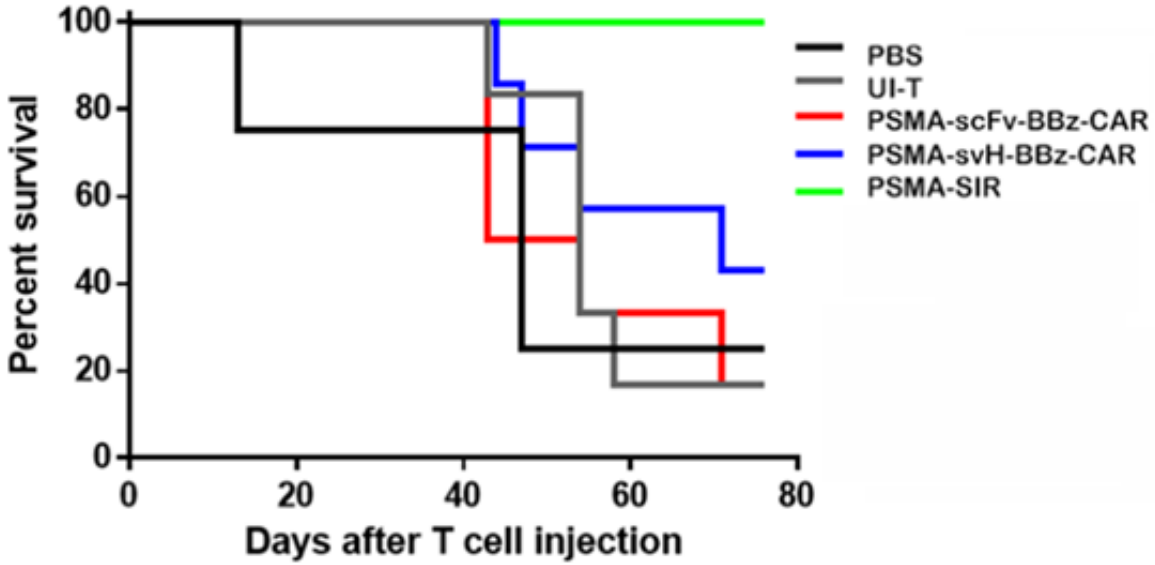
PSMA SIR-T™ Demonstrated Better Tumor Remission and Durability Compared to CAR Controls with the Same PSMA Binding Domain





Preclinical data generated in prostate tumor-bearing mice.

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Financial Update

Joe Vazzano
CHIEF FINANCIAL OFFICER

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Q1 2026 Financial Overview

- **Q1 26 net product revenue of $8.7M** vs. Q4 25 net product revenue of $2.4M
- **Q1 26 cost of sales of $2.7M** vs. Q4 25 cost of sales of $1.0M
- **R&D expenses of $9.6M for Q1 26** (including $7.0M license payment for PSMA SIR-T™ asset) vs. $9.9M for Q1 25
- **SG&A expenses of $19.5M for Q1 26** vs. $9.8M for Q1 25
- **$168.3M in cash, cash equivalents and short-term investments as of March 31, 2026**

Conclusions

Vishwas Seshadri, Ph.D., M.B.A.
CHIEF EXECUTIVE OFFICER, DIRECTOR

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Advancing Toward Our Mission With Every Step

Strong Leading Indicators for ZEVASKYN® Launch

Advancing PSMA SIR-T™ in Prostate Cancer

Our mission to harness the promise of genetic medicine to transform the lives of patients is inspired by our vision, to realize a world where cure is the new standard of care.

Questions

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