
KIROMIC
BioPharma
Revolutionizing CAR T-Cell Therapy
December 2024
OTCQB: KRBP
Kiromic.com

Forward-Looking Statements

This presentation contains forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as: "will," "potential," "could," "can," "believe," "intends," "continue," "plans," "expects," "anticipates," "estimates," "may," or the negative of these terms or other comparable terminology. These forward-looking statements include, but are not limited to, statements regarding: Kiromic's ability to achieve its objectives and Kiromic's financing strategy and availability of funds. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, levels of activity, performance, or achievements to be materially different from the information expressed or implied expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to, the risks and uncertainties discussed in our Annual Report on Form 10-K for the year ended December 31, 2023, and as detailed from time to time in our other SEC filings. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance, or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. Such forward-looking statements relate only to events as of the date of this presentation. We undertake no obligation to update any forward-looking statements except to the extent required by law.

Contents

The Kiromic Difference

Kiromic BioPharma is an allogeneic Gamma Delta T-cell company featuring unique, proprietary, end-to-end bioinformatic, AI-targeting and manufacturing technologies to treat solid tumors

1 Diamond AI™ Neural Network

2 Gamma Delta CAR-T Cell Platform

3 Allogeneic, Off-the-Shelf Cellular Therapy

Cells from healthy donors, not ill cancer patients, for maximum efficacy

4 Solid Malignancies

(~90% of all cancers[1])

5 In-House cGMP Manufacturing

[1]American Cancer Society, Cancer Facts & Figures 2022. https://www.cancer.org/research/cancer-facts-statistics.html

Competitive Landscape

8 Known Companies Working in the Gamma Delta T-Cell Therapy Space.

No Known Competitors with AI-driven Technology Combined with a Gamma Delta CAR-T Delivery Platform.

Source – Wells Fargo Securities Conference, November 2017

Solid Malignancy Market Opportunity

Global CAR T-Cell Therapy Market by 2027[1]

$33+ Billion

90%

of Cancers Are Solid Tumors[2]

[1] Global CAR T-Cell Therapy Market, By Product Type, By Tumor Type, By Indication, By Treatment Type, By Targeted Antigen, By End User, By Region, Competition, Forecast and Opportunities, 2017-2027 (ReportLinker)

[2] American Cancer Society, Cancer Facts & Figures, 2022. https://www.cancer.org/research/cancer-facts-statistics.html

Competitive Difference

Allogeneic Gamma Delta Based T-Cell Therapies

Superior Specificity for Multiple Solid Tumors

- **Potential broad treatment** for solid malignancies that express Kiromic-developed biomarkers such as Iso-mesothelin.
- Solid tumors represent ~90% of new cancer diagnoses but finding specific targets to treat them has been challenging.
- Kiromic tackles the issue by identifying new cancer-specific targets.

Vertical Integration

- In-house **cGMP manufacturing**
- In-house **QC/EM lab**
- In-house **product and process development** (R&D and MSAT)

Superior Efficacy from γδT Cells

- **Strong efficacy** demonstrated in preclinical animal models.
- In solid tumors, the benefit of infiltrating conventional T cells may vary.
- In contrast, GDT cells are the infiltrating immune cells most likely to be associated with positive outcomes, as shown in an analysis of 18,000 tumors from 39 indications1

Lower Costs/ Greater Access[2]

- **Outpatient treatment** means reduced hospitalization and other treatment-related costs.
- **Lower projected cost** increases patient and health care professional access to these therapies, and potentially provides important quality-of-life benefits for patients as well.

1. Gentles AJ, Newman AM, Liu CL, *et al*. The prognostic landscape of genes and infiltrating immune cells across human cancers. Nat Med. 2015 Aug;21(8):938-945.
2. Maziarz RT. CAR T-cell therapy total cost can exceed $1.5M per treatment. Cell Therapy Next; May 29, 2019.

Contents

Artificial Intelligence and Bioinformatic Analytic Discovery & Development Platform

Algorithms and Large-Scale Genomics Analysis for Target Prediction

Diamond AI™

Artificial Intelligence Neural Network

- ✓ **AI Integrated with Each Stage of the Kiromic Therapy Production Lifecycle**
- ✓ **Discovering New Multi-tumor Targets**
- ✓ **Identifying Optimal Donors and Patients to Maximize the Therapy Success**

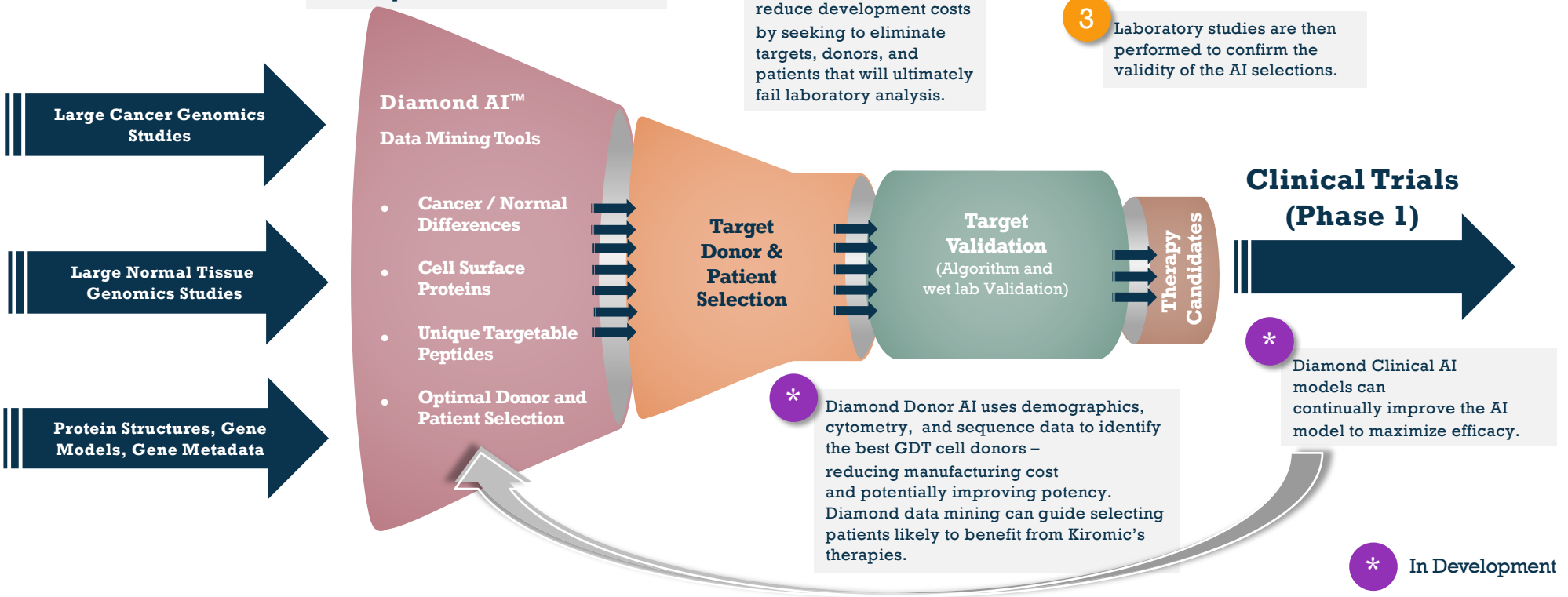
The Kiromic Difference - Diamond AI™ Target Discovery Platform

Diamond AI™ target discovery platform powers innovation and significantly reduces development time and cost.

1. Diamond AI drives discovery by sifting through billions of data points to identify cancer specific immunotherapy targets, donors with the best GDT cell yields, and patients who will most likely benefit from our therapies.

2. Diamond AI prediction and validation platform reduce development costs by seeking to eliminate targets, donors, and patients that will ultimately fail laboratory analysis.

3. Laboratory studies are then performed to confirm the validity of the AI selections.



* Diamond Donor AI uses demographics, cytometry, and sequence data to identify the best GDT cell donors – reducing manufacturing cost and potentially improving potency. Diamond data mining can guide selecting patients likely to benefit from Kiromic's therapies.

* Diamond Clinical AI models can continually improve the AI model to maximize efficacy.

* In Development

Contents

Kiromic GDT Cell Therapy Pipeline

Multiple Indications

Deltacel™

Unmodified, off-the-shelf product candidate targeting stress ligands on cancer cells

Initial indication: NSCLC in combination with targeted, low-dose radiation

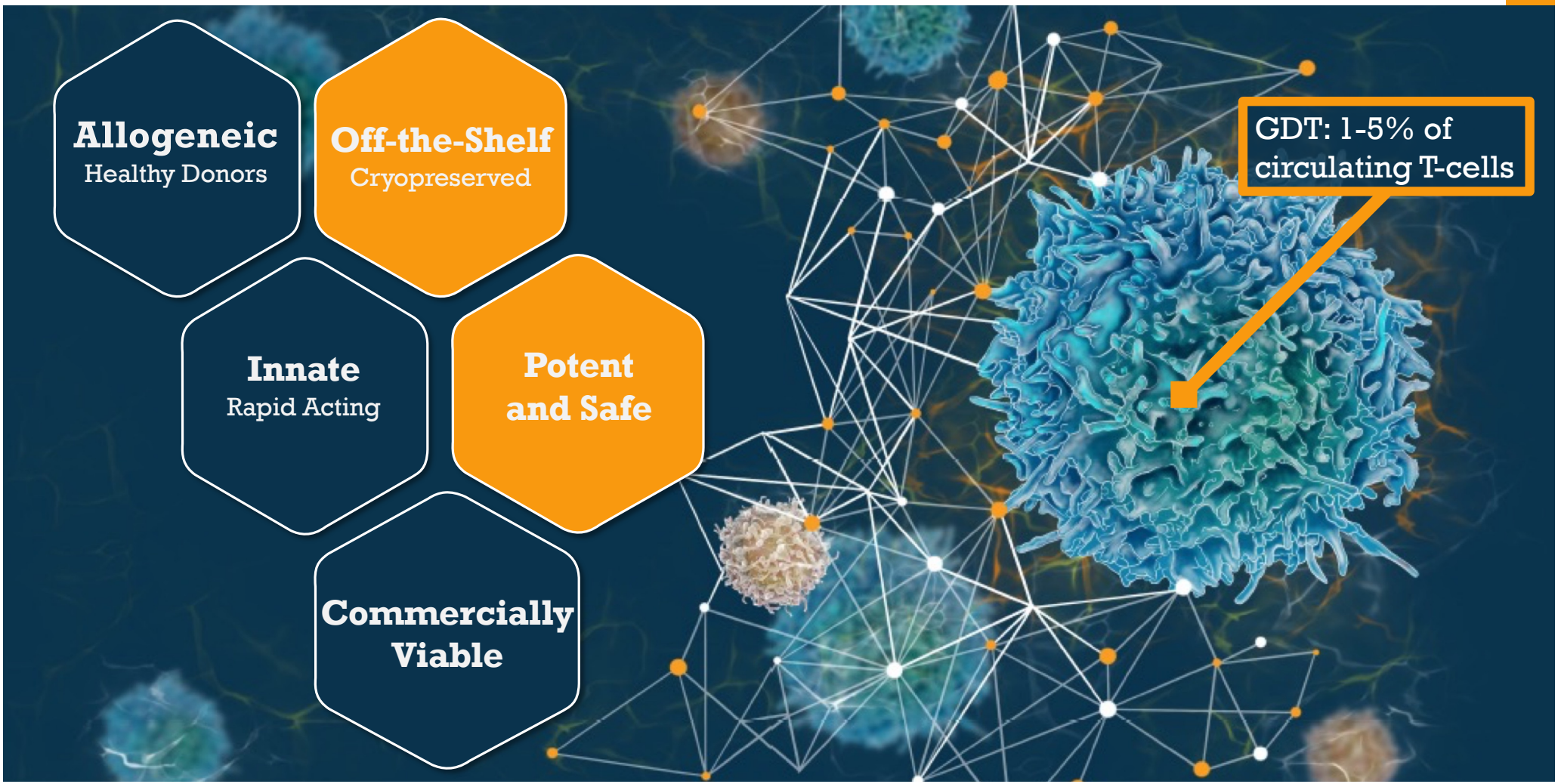
Isocel™

Engineered off-the-shelf product candidate targeting a tumor-specific variant of mesothelin in ovarian cancer, mesothelioma and pancreatic cancer

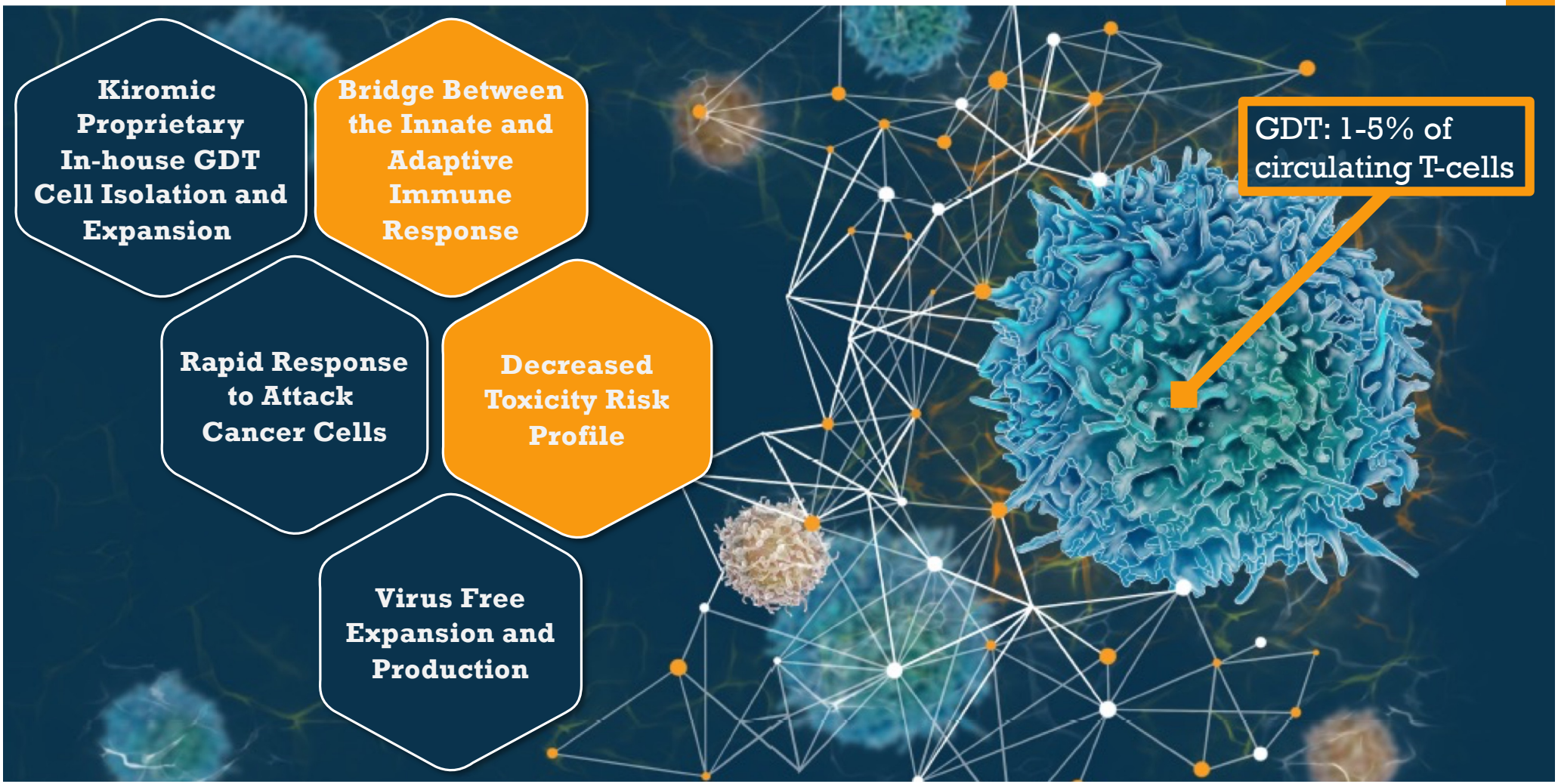
Procel™

Engineered off-the-shelf product candidate targeting PDL-1+ tumors

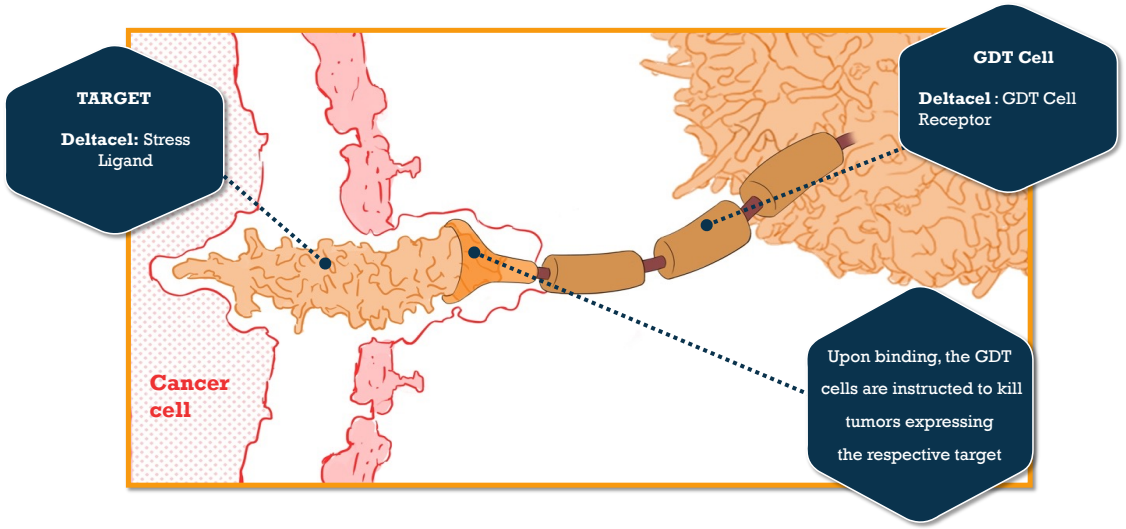
Gamma Delta T-Cells: Guardians of the Immune System

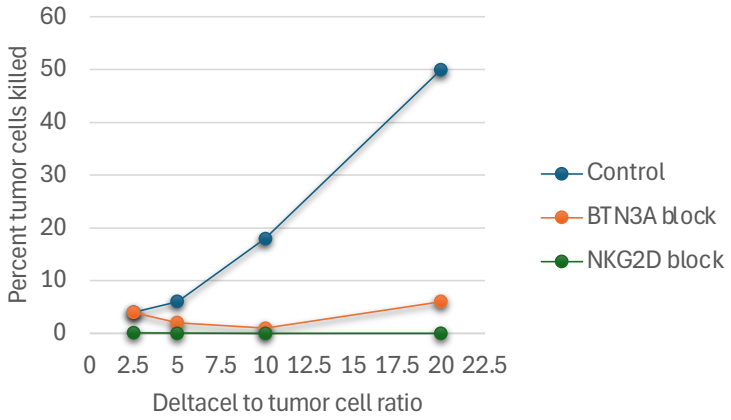


Deltacel: Non-Viral Gamma Delta T-Cell Development



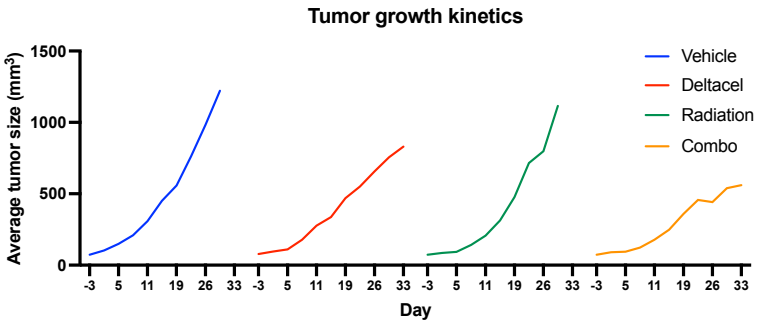
GDT Cell Therapy Mechanism of Action: Targeting Unique Identifiers on Tumor Tissues

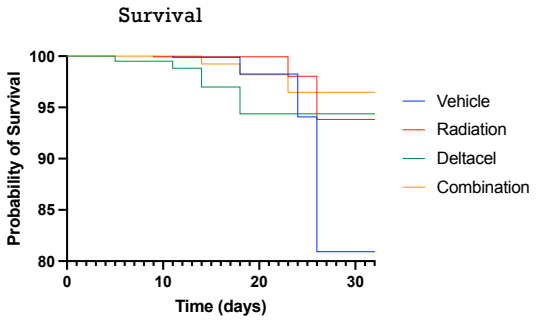




KB-GDT-01 T-Cell Therapy (Deltacel) Strong Efficacy

Deltacel™ effectively controls established A549 NSCLC tumors in immunocompromised mice when combined with a low-dose radiation

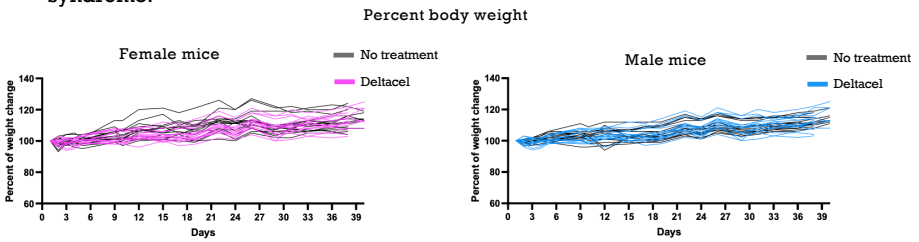


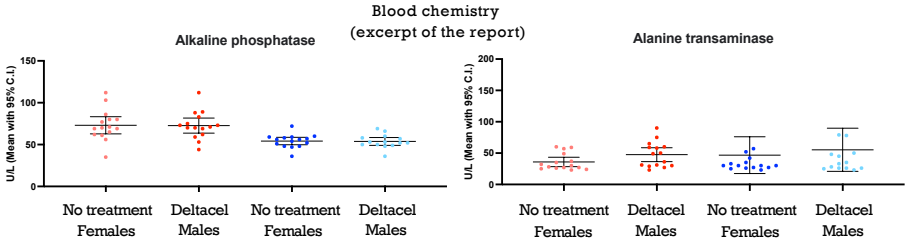


KB-GDT-01 T-Cell Therapy (Deltacel) Strong Safety

Deltacel™ does not cause any macroscopic or microscopic toxicity, even when given at over 8x the maximum dose that will be tested in the clinical trial

1. Deltacel did not impact body weights, food consumption, or macroscopic evaluations at necropsy.
2. Microscopic histopathological evaluations showed no evidence of toxicity.
3. Blood chemistry tests showed no impact on organ functions.
4. Plasma cytokine analysis showed that Deltacel administration did not result in the overproduction of inflammatory cytokines, commonly associated to cytokine release syndrome.

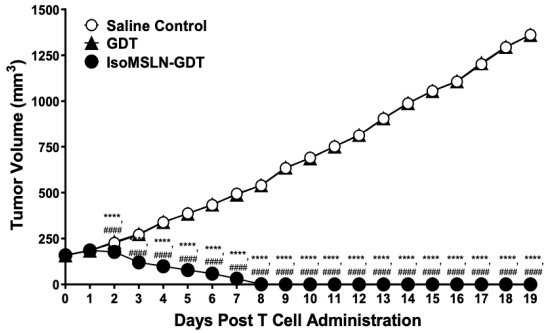




GDT CAR T-Cell Therapy (Isocel)* Strong Efficacy

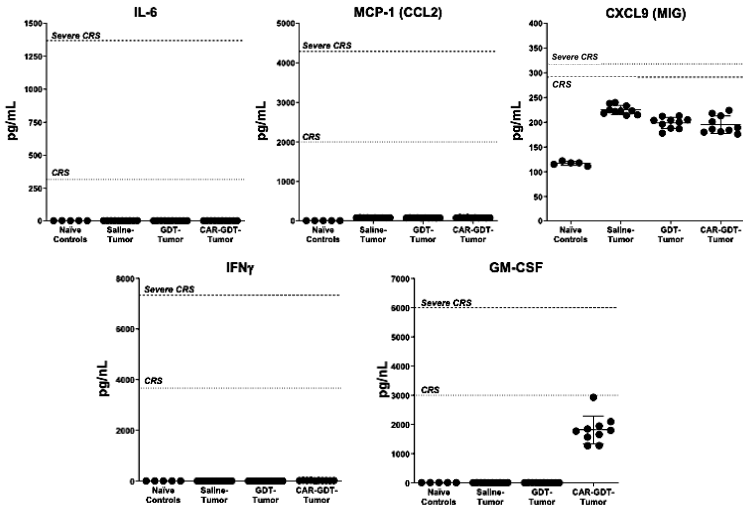
Isocel eradicates established NCI-H226 pleural epithelioid mesothelioma and prevents tumor growth in a model of recurrence.

Tumor eradication



GDT CAR T-Cell Therapy (Isocel)* Strong Safety

Isocel does not lead to cytokine level increases modeled to cause severe CRS or CRS, with circulating cell numbers regulated by objective response.

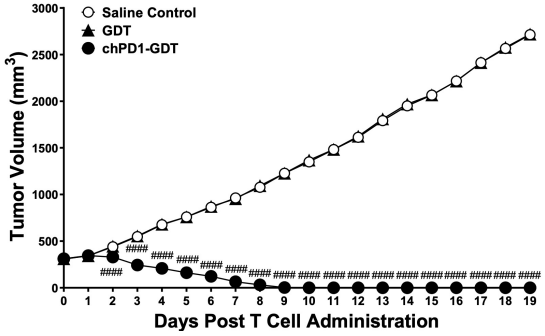


*Preclinical models: nude mice with subcutaneous NCI-H226 cells injections

GDT chPD1 T-Cell Therapy (Procel)* Strong Efficacy

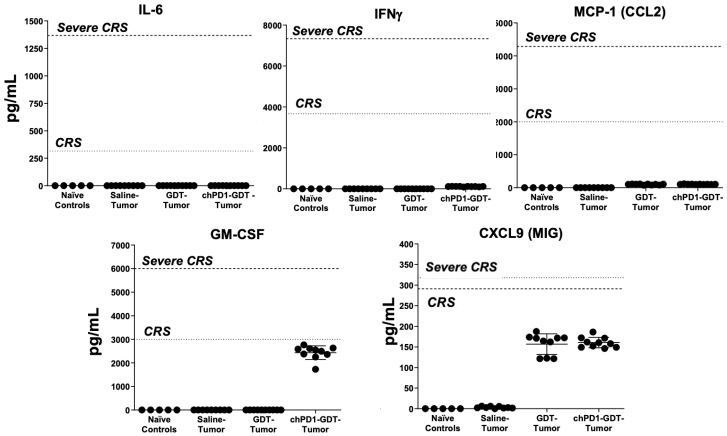
Procel eradicates established NCI-H226 pleural epithelioid mesothelioma and extends survival.

Tumor eradication



GDT chPD1 T-Cell Therapy (Procel)* Strong Safety

Procel does not lead to cytokine level increases modeled to cause severe CRS or CRS, with circulating cell numbers regulated by objective response.



*Preclinical models: nude mice with subcutaneous NCI-H226 cells injections

Clinical Development Strategy

Candidate	Target	Indications	Preclinical	IND	Phase 1
Deltacel-01 **Deltacel™ in combination with Low-Dose Radiation** Allogeneic, Non-Viral, Non-engineered off-the-shelf GDT therapy	**Universal Non-Engineered**	**NSCLC**			• **First patient Nov 2023** • **FTD Aug 2024** • **Expansion phase started in Sep 2024**
Isocel™ **Alone or in combination with Low-Dose Radiation*** Allogeneic, off-the-shelf, Viral vector-free GDT CAR-T therapy	**Mesothelin Isoform** ***KRBP proprietary target***	**OC** **MPM** **PAAD**		**H2 2025**	
Procel™ **Alone or in combination with Low-Dose Radiation*** Allogeneic, Viral vector-free GDT CAR-T therapy	**PDL-1**	**Multi-indication PDL-1+ tumors**		**2026**	

Subject to obtaining sufficient financing to support the progression of the development of our clinical trial candidates.
*This program may result in two clinical trials, one with and one without low-dose radiation, depending on the pre-clinical evidence.

In-House cGMP Manufacturing Creates De-Risked Value

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Deltacel-01 Phase 1 Clinical Trial Design

GDT cells for Stage 4 Metastatic Non-Small Cell Lung Cancer (NSCLC) given in combination with low-dose radiation therapy

Key Highlights

Allogeneic and scalable: Designed for easy manufacturing and delivery without the need for patient-specific customization.

Validated by clinical outcomes: Tumor reduction and disease stabilization demonstrated in multiple patients.

Addressing unmet needs: Focused on advanced NSCLC patients who have exhausted standard therapies

Key outcomes:

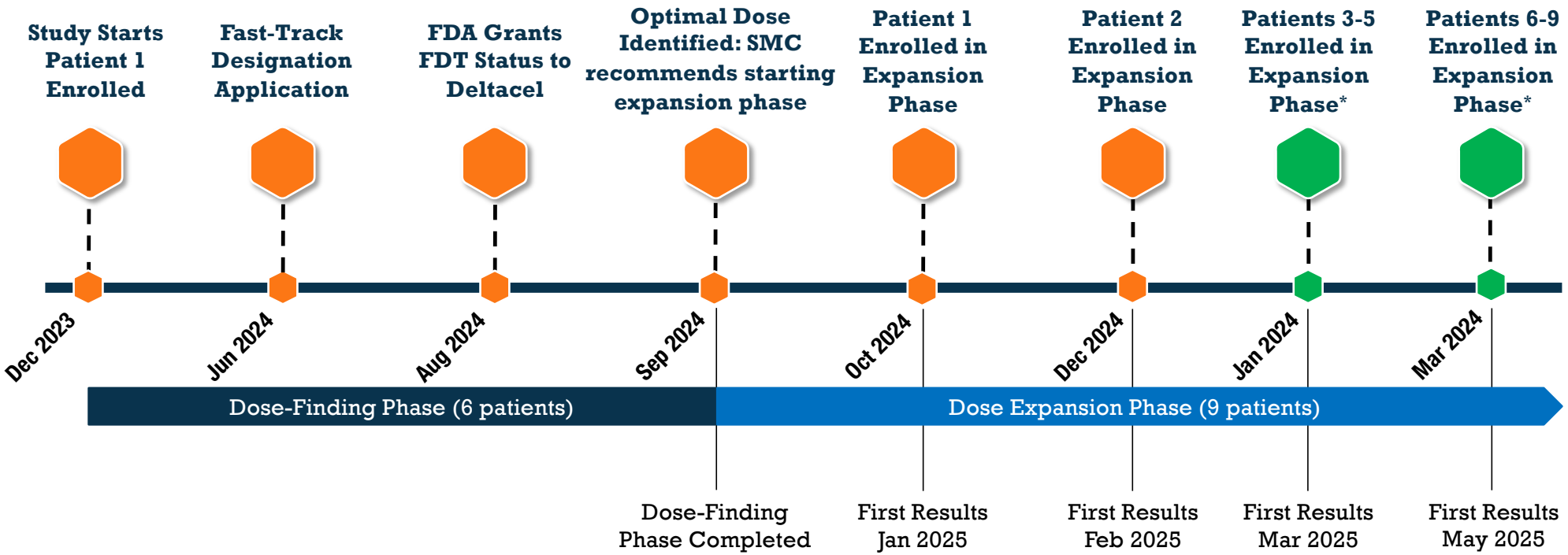
- ✓ **27% tumor reduction at 11-month** follow-up for Patient 1 with durable **progression-free survival (PFS)** and no adverse events
- ✓ **31.9% tumor reduction** at eight months in Patient 4 = Partial Response
- ✓ **Median PFS across all patients is 6 months**, supporting safety and efficacy claims, with a **follow-up duration of 10 months** across all patients, as of December 2024

Patients Treated	DLTs	Optimal Dose	Median PFS	Median Length of FU	Longest PFS
7	0	Identified as Dose Level 1	6 months	10 months	12 months

Trial Design

- Kiromic's innovative design consists of IV gdT cell infusions preceded by low-dose, localized radiation that are performed in an in-patient setting without hospitalization
- **Primary objective:**
  - Safety of Deltacel in combination with low-dose radiation
- **Secondary outcome measures:**
  - Objective response, progression-free survival, overall survival, time to progression, time to treatment response and disease control rates

Recent and Upcoming Milestones



SMC = Safety Monitoring Committee

* The milestones and timing of completion are based on the company's current expectations in consultation with its partners and vendors.

Deltacel-01 Clinical Trial Timeline

			FU visit 1		FU visit 2		FU visit 3		FU visit 4		FU visit 5		FU visit 6		FU visit 7		FU visit 8	
Patient	**Enrolled**	**Confirmed tolerability**	**FU time (months)**	**Outcome**	**FU time (months)**	**Outcome**	**FU time (months)**	**Outcome**	**FU time (months)**	**Outcome**	**FU time (months)**	**Outcome**	**FU time (months)**	**Outcome**	**FU time (months)**	**Outcome**	**FU time (months)**	**Outcome**
1	Dec 2023	Yes	1.5	SD	2	-6.6%, SD	4	-7%, SD	6	-13%, SD	8	-20%, SD	10	-27%, SD	11	-27%, SD	*12*	*Expected Dec 2024*
2	Jan 2024	Yes	1.5	SD, CR in brain	2	SD, clean brian MRI	4	PD										
3	Feb 2024	Yes	1.5	-6%, SD	2	-6%, SD	4	-3.1%, SD	6	PD								
4	Apr 2024	Yes	1.5	-9.2%, SD	2	-2%, SD	4	-3.6%, SD	6	-5.3%, SD	8	-31.9%, PR	*10*	*Expected Jan 2025*				
5	May 2024	Yes	2	PD														
6	Aug 2024	Yes	2	+6%, SD	*4*	*Expected Dec 2024*												
7	Oct 2024	Yes	*2*	*Expected Dec 2024*														
8	Dec 2024	*Expected Jan 2025*	*2*	*Expected Feb 2025*														

Percents indicate changes in tumor volume with respect to pre-treatment measurements.
SD = Stable Disease
PD = Progression of Disease
PR = Partial Response
CR = Complete response
A patient participates in the trial until disease progression is documented or after completion of the 12-month follow-up visit.

Leadership Team

Pietro Bersani
CPA, CGMA

CEO

Leonardo Mirandola
Ph.D.

CSO/INTERIM COO

Scott Dahlbeck
M.D., Pharm.D.

COSO

Brian Hungerford
CPA,CGMA

CFO

Board of Directors

Michael Nagel

Chairperson

Pietro Bersani
CPA, CGMA

Director

Pam Misajon

Independent Director

Michael Catlin

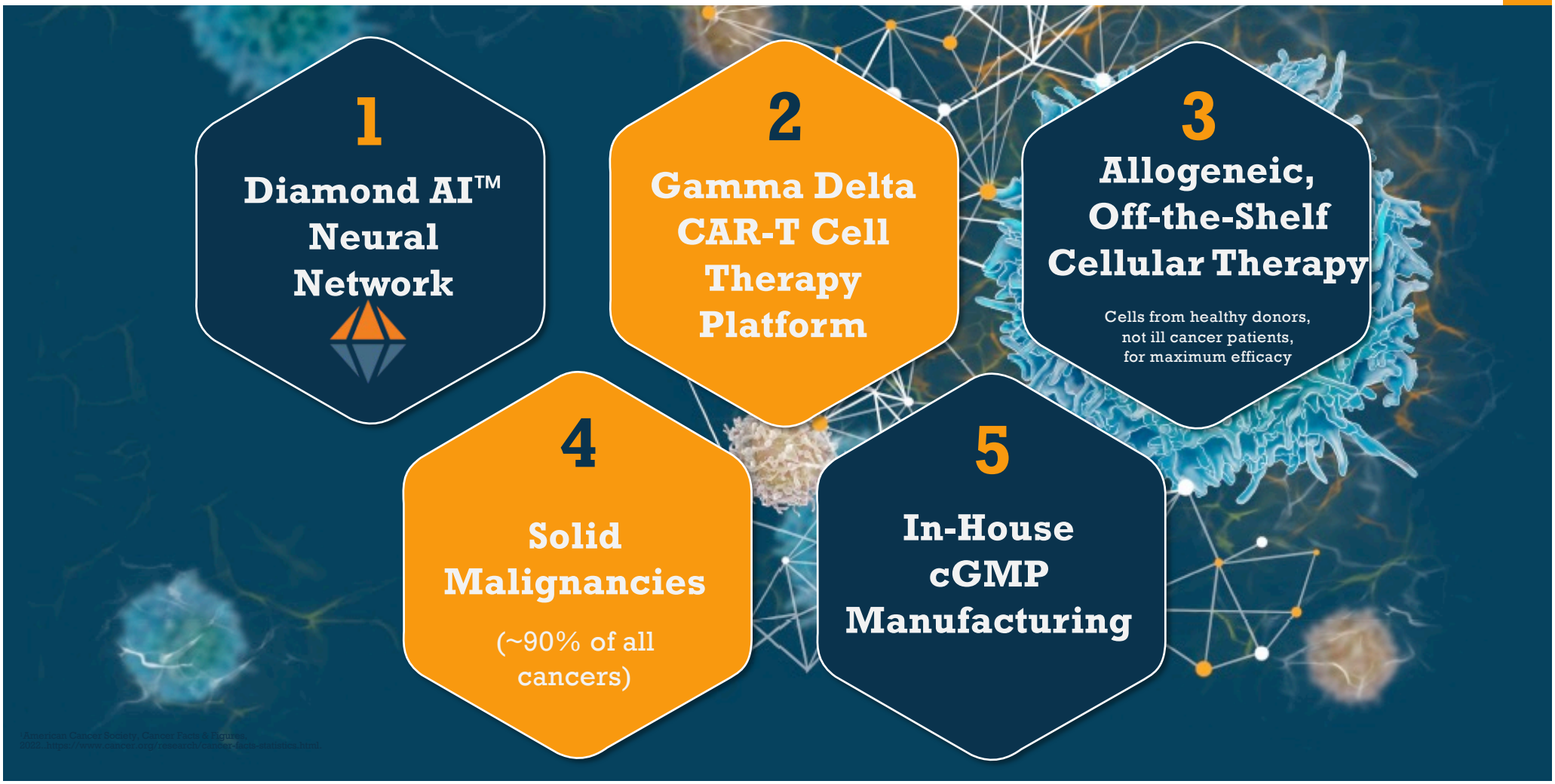
Independent Director

Summary Balance Sheet & Cap Table

Balance Sheet Data (As of September 30, 2024)	**As Reported** (In Thousands)
Cash and Cash Equivalents	**$3,056**
Working Capital	**($14,826)**
Total Assets	**$10,245**
Total Stockholders' Deficit	**($9,288)**

Cap Table (As of September 30, 2024, except as *noted below)	**Common Stock Equivalents**
Common Stock * As of 12/10/24	1,533,272
Restricted Stock Units ($3.81 Weighted average grant date fair value)	56,239
Options ($101.04 Weighted average exercise price)	18,093
Warrants	15,416
Convertible Preferred Share Shares ($14MM principal & $6.50 share conversion) ($16.8MM principal & $2.50 share conversion) ($6.0MM principal & $1.13 share conversion) *Inclusive of $3.0MM exchange agreement issued on November 1, 2024	16,439,289
Convertible Notes *Inclusive of $2.0MM note issued on December 9, 2024	8,009,577
Fully Diluted Common Shares	26,071,886

Value Proposition Summary



[1]American Cancer Society, Cancer Facts & Figures 2022. https://www.cancer.org/research/cancer-facts-statistics.html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