UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16
OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

May 2, 2023

Commission File Number: 001-39363

IMMATICS N.V.

Paul-Ehrlich-Straße 15
72076 Tübingen, Federal Republic of Germany
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:

Form 20-F ☒ Form 40-F ☐

INFORMATION CONTAINED IN THIS REPORT ON FORM 6-K

On May 2, 2023, Immatics N.V. (the "Company," "Immatics," "we," or similar terms) announced an interim clinical data update for 11 patients with recurrent and/or refractory solid cancers treated with ACTengine® IMA203 TCR-T monotherapy in the ongoing Phase 1b dose expansion Cohort A. IMA203 TCR-T cells are directed against an HLA-A*02-presented peptide derived from PRAME, a broadly expressed solid cancer target with clinical proof-of-concept for IMA203 demonstrated by Immatics in 2022. Overall, IMA203 showed a high rate of deep and durable objective responses, with a confirmed objective response rate of 67% (6/9), across multiple tumor types, including two confirmed partial responses (cPR) ongoing at more than 9 months after treatment and three additional partial responses ongoing at data cut-off. IMA203 monotherapy continues to be well tolerated in heavily pre-treated patients at doses of up to approximately 9 billion CD8+ TCR-T cells. No high-grade cytokine release syndrome (CRS) and no immune effector cell associated neurotoxicity syndrome (ICANS) were observed in Cohort A at cut-off.

Safety data for IMA203 TCR-T monotherapy in Phase 1b Cohort A**:** Treatment with IMA203 monotherapy continues to show manageable tolerability at doses as high as ~$9x10^9$ TCR-T cells.

- At data cut-off on April 4, 2023, 11 PRAME-positive patients were infused with IMA203 TCR-T cells at dose level (DL) 4 or DL5 with a mean total infused dose of $3.67x10^9$ TCR-T cells (range 1.30-$8.84x10^9$ TCR-T cells).
- Based on data review of 6 patients in the exploratory highest DL5, this DL was cleared for safety by the DSMB (Data and Safety Monitoring Board), and the updated provisional recommended Phase 2 dose (RP2D) now includes DL4 and DL5. The final RP2D will be defined prior to starting Phase 2.
- Most frequent treatment-emergent adverse events (TEAEs) were as expected for cell therapies.
- All 11 patients experienced expected cytopenia (Grade 1-4) associated with lymphodepletion. 10 patients (91%) had a low to moderate (Grade 1-2) cytokine release syndrome (CRS), of which 5 patients (45%) had Grade 1, and 5 patients (45%) had Grade 2 CRS. No high-grade (Grade 3 or higher) CRS and no immune effector cell associated neurotoxicity syndrome (ICANS) were observed in any of these 11 patients. No dose-dependent increase of CRS was observed across Phase 1a and Phase 1b Cohort A (N=38 patients infused with IMA203 in total).
- No additional dose limiting toxicities (DLT) were observed in Cohort A since the initial Phase 1a dose escalation.

Grade ≥3 TEAEs Observed Regardless of Relatedness to Study Treatment

TEAEs by maximum severity for all patients in Ph1b Cohort A dose expansion (N=11)

Adverse event (System organ class, Preferred term)	≥ Grade 3 No.	≥ Grade 3 %
Patients with any adverse event	**11**	**100.0**
Adverse Events of Special Interest		
Cytokine release syndrome	0	0.0
ICANS[1]	0	0.0
Blood and lymphatic system disorders		
Neutropenia	10	90.9
Lymphopenia	6	54.5
Leukopenia	5	45.5
Anaemia	5	45.5
Thrombocytopenia	4	36.4
Leukocytosis	1	9.1
Lymphocytosis	1	9.1

Adverse event (System organ class, Preferred term)	≥ Grade 3 No.	≥ Grade 3 %
table continued...		
Investigations		
Alanine aminotransferase increased	1	9.1
Aspartate aminotransferase increased	1	9.1
Blood alkaline phosphatase increased	1	9.1
Eye disorders		
Ulcerative keratitis	1	9.1
Gastrointestinal disorders		
Ileus	1	9.1
Infections and infestations		
Infection	1	9.1
Nervous system disorders		
Headache	1	9.1
Respiratory, thoracic and mediastinal disorders		
Laryngeal inflammation	1	9.1

All treatment-emergent adverse events (TEAEs) with ≥ Grade 3 regardless of relatedness to study treatment that occurred in at least 1 patient (except for CRS and ICANS, where only Grade 1-2 occurred; listed for completeness due to being adverse events of special interest) are presented. Adverse events were coded using the Medical Dictionary for Regulatory Activities. Grades were determined according to National Cancer Institute Common Terminology Criteria of Adverse Events, version 5.0. Grades for CRS and ICANS were determined according to CARTOX criteria (Neelapu *et al.*, 2018). Patients are counted only once per adverse event and severity classification. Based on interim data extracted from open clinical database (04-Apr-2023). [1] ICANS: Immune effector cell-associated neurotoxicity syndrome.

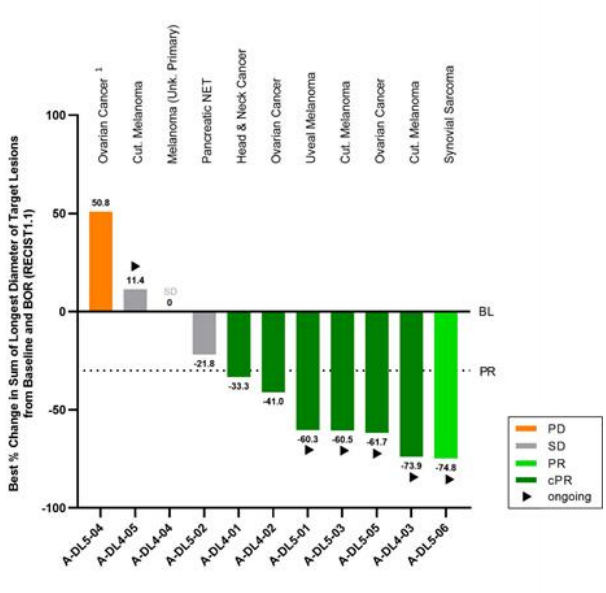
Clinical activity for IMA203 TCR-T monotherapy in Phase 1b Cohort A: IMA203 monotherapy demonstrates a high rate of deep objective responses with ongoing durability of more than 9 months after treatment in some patients.

- At data cut-off on April 4, 2023, 11 patients were infused with IMA203 TCR-T cells and evaluable for at least one tumor response assessment post treatment.
- Objective responses were observed in last-line solid cancer patients including cutaneous melanoma, ovarian cancer, uveal melanoma, head and neck cancer, synovial sarcoma
- Patients were heavily pre-treated with a mean of ~4 lines of prior systemic treatments and had exhausted all available standard of care treatments.
- All cutaneous melanoma patients were checkpoint inhibitor-refractory, all ovarian cancer patients were platinum-resistant.
- Initial objective response rate (ORR) of 64% (7/11) was observed at ~week 6 (partial responses, PR, according to RECIST 1.1).
- Confirmed ORR of 67% (6/9) was observed at ~month 3; initial responses at week 6 were confirmed for all 6 responders with available subsequent 3-month scan.
- Median duration of response[1] was not reached (min 1.3+ months, max 8.8+ months) at a median follow-up[2] of 8.5 months.
- At data cut-off, 5 of 7 responses remain ongoing:
  - 2 cPRs (cut. & uveal melanoma) ongoing at 9+ months
  - 1 cPR (cut. melanoma) ongoing at 6+ months
  - 1 cPR (ovarian cancer) ongoing at ~3 months
  - 1 PR (synovial sarcoma) ongoing at 6+ weeks
- Objective responses were observed in patients independent of tumor type at all PRAME expression levels above Immatics' mass spectrometry-guided RNA threshold including expression levels at or just above this threshold.
- IMA203 T cells were found in all evaluable tumor tissues and the level of tumor infiltration was associated with objective responses

1 Duration of response (DOR) in confirmed responders is defined as time from first documented response until disease progression/death. Patients with ongoing response will be censored at date of data cut-off. Median DOR is analyzed by using the Kaplan-Meier method.

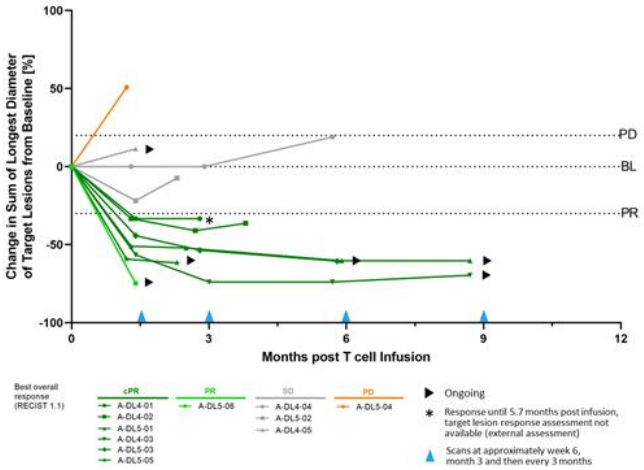
2 Median follow-up is analyzed by using the reverse Kaplan-Meier method.

Best Overall Response – Phase 1b Cohort A

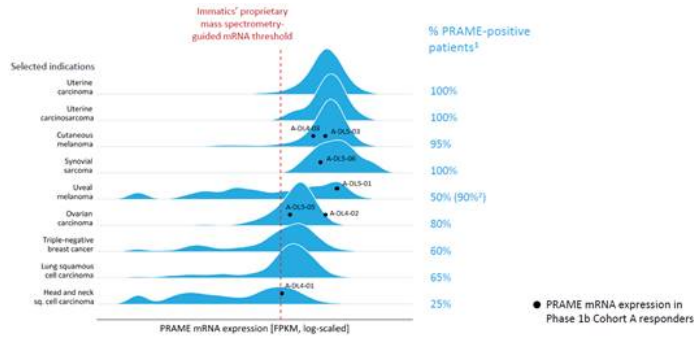


[1] Ovarian cancer patient A-DL5-04 erroneously received one dose of nivolumab and is part of intent-to-treat population (shown here) but not per-protocol population; NET: Neuroendocrine Tumor; PD: Progressive disease; SD: Stable disease; PR: Partial response; cPR: Confirmed partial response; BL: Baseline; BOR: Best Overall Response

Response over Time – Phase 1b Cohort A



PRAME Prevalence across Different Tumor Types and PRAME Expression in IMA203 TCR-T Responders



PRAME target expression distribution (blue histogram) based on TCGA RNAseq data, patient data (black dots) based on IMADetect® qPCR testing of screening biopsies; [1] PRAME target prevalence is based on TCGA RNAseq data combined with a proprietary MS-guided RNA expression threshold; [2] PRAME target prevalence in uveal melanoma based on IMADetect® qPCR testing of screening biopsies from clinical trial patients (n=21) demonstrates substantial higher prevalence of 90% compared to prevalence based on TCGA data of 50%, TCGA: early & late-stage primary tumor samples, Immatics clinical trials: late-stage/metastatic tumor samples, Role of PRAME in metastasis of uveal melanoma: Field *et al.* 2016 Clinical Cancer Research; MS: Mass spectrometry.

Manufacturing of IMA203 TCR-T cells

- Immatics' proprietary manufacturing process has a manufacturing time of 7 days (+7-day expedited release testing), with a success rate of 94% in achieving the provisional RP2D.

- Manufacturing improvements (including monocyte depletion) and higher applied cell doses implemented for the Phase 1b part of the trial led to significantly increased levels of IMA203 T cells in the blood of patients in Phase 1b Cohort A compared to patients in the Phase 1a dose escalation.

- Immatics is currently building a state-of-the-art facility designed to manufacture ACTengine® IMA203 TCR-T products, as well as other cell therapy candidates for registration-directed trials and initial commercial supply. Built with flexibility and cost-efficiency in mind, the facility is designed to be scalable via a modular design to accommodate manufacturing demands. The facility is expected to be operational in 2024.

Development strategy to realize the multi-cancer opportunity PRAME

Immatics believes, the results presented today further validate PRAME as one of the most promising solid tumor targets for TCR-based therapies. Immatics' IMA203 development strategy is based on two pillars aimed initially at a (1) fast-to-market approach and, later at a (2) broad development.

The first objective is to deliver the PRAME-targeted TCR-T cell therapy in 1-2 last-line solid cancer types as fast as possible with a focus on indications with PRAME prevalence above 80% and where clinical proof-of-concept has been demonstrated, such as cutaneous melanoma (potentially bundled with uveal melanoma) and/or ovarian cancer. The buildout of the manufacturing facility will support Immatics' efforts to maximize speed to market. Immatics plans to start a first Phase 2 trial in 1H 2024, which is intended be to designed as a registration-directed trial.

As a second step, Immatics plans to also expand development to other cancer types, such as uterine cancer, lung cancer, breast cancer, head and neck cancer and other tumor types having a broad patient reach.

An update on all three IMA203 Phase 1b Cohorts and clinical development path for PRAME TCR-T monotherapy towards registration-directed trials and potential commercialization is planned for 4Q 2023.

In addition to ACTengine® TCR-T, Immatics is addressing PRAME-positive cancers with a second therapeutic modality, TCR Bispecifics (TCER®), to leverage the full potential of the multi-cancer opportunity PRAME. Immatics' TCER® IMA402 is a next-generation, half-life extended TCR Bispecific for which Immatics submitted a clinical trial application (CTA) to the Paul-Ehrlich-Institute (PEI) on April 14, 2023 to initiate the Phase 1/2 trial. The trial is expected to commence in 2H 2023 with first clinical data planned in 2024.

Both approaches, ACTengine® and TCER®, are distinct therapeutic modalities that have the potential to provide innovative treatment options for a variety of cancer patient populations with different medical needs. Immatics will continue to evaluate which of these therapeutic modalities (ACTengine® vs. TCER® or both) is best suited for each cancer type.

The Company is well capitalized with cash position[3] of $386m at YE 2022 and protected reach into 2025 to leverage multi-cancer PRAME opportunity.

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In connection with the foregoing clinical data update, the Company issued a press release, a copy of which is attached hereto as Exhibit 99.1, made available a presentation, a copy of which is attached hereto as Exhibit 99.2, and made available an updated investor presentation on its website, a copy of which is attached hereto as Exhibit 99.3.

Certain statements in this Report on Form 6-K may be considered forward-looking statements. Forward-looking statements generally relate to future events or Immatics' future financial or operating performance. For example, statements concerning the timing of product candidates and Immatics' focus on partnerships to advance its strategy

3 Cash position includes cash and cash equivalents as well as other financial assets and was €362.2 million as of December 31, 2022 ($386.3 million using the exchange rate published by the European Central Bank in effect as of December 31, 2022 (1 EUR = 1,0666 USD).

are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may”, “should”, “expect”, “intend”, “will”, “estimate”, “anticipate”, “believe”, “predict”, “potential” or “continue”, or the negatives of these terms or variations of them or similar terminology. Such forward-looking statements are subject to risks, uncertainties, and other factors which could cause actual results to differ materially from those expressed or implied by such forward looking statements. These forward-looking statements are based upon estimates and assumptions that, while considered reasonable by Immatics and its management, are inherently uncertain. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. Factors that may cause actual results to differ materially from current expectations include, but are not limited to, various factors beyond management’s control including general economic conditions and other risks, uncertainties and factors set forth in filings with the SEC. Nothing in this Report on Form 6-K should be regarded as a representation by any person that the forward-looking statements set forth herein will be achieved or that any of the contemplated results of such forward-looking statements will be achieved. You should not place undue reliance on forward-looking statements, which speak only as of the date they are made. Immatics undertakes no duty to update these forward-looking statements. All the scientific and clinical data presented within this Report on Form 6-K are – by definition prior to completion of the clinical trial and a clinical study report – preliminary in nature and subject to further quality checks including customary source data verification.

INCORPORATION BY REFERENCE

This Report on Form 6-K (other than Exhibits 99.1 and 99.2) shall be deemed to be incorporated by reference into the registration statements on Form F-3 (Registration Nos. 333-240260 and 333-258351) of Immatics N.V. and to be a part thereof from the date on which this report is filed, to the extent not superseded by documents or reports subsequently filed or furnished.

EXHIBIT INDEX

Exhibit No.	**Description**
99.1	Press release dated May 2, 2023
99.2	Presentation dated May 2, 2023
99.3	Presentation dated May 2, 2023

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: May 2, 2023

IMMATICS N.V.

By: /s/ Harpreet Singh
Name: Harpreet Singh
Title: Chief Executive Officer

PRESS RELEASE

Immatics Reports Interim Clinical Data from Ongoing Phase 1b Cohort A Monotherapy with ACTengine® IMA203 TCR-T Targeting PRAME

*Company to host **conference call** today, May 2, at 8:30 am EDT / 2:30 pm CEST*

- Update covers data from 11 heavily pre-treated, last-line patients in Phase 1b dose expansion Cohort A treated with IMA203 TCR-T monotherapy against PRAME
- Objective response rate (ORR): 64% (7/11) initial ORR at week 6 and 67% (6/9) confirmed ORR at month 3
- Median duration of response not reached at median follow-up time of 8.5 months at data cut-off
- Objective responses independent of solid tumor type at low, medium and high PRAME expression levels in checkpoint-refractory cutaneous melanoma, platinum-resistant ovarian cancer, uveal melanoma, head and neck cancer and synovial sarcoma
- Cohort A IMA203 monotherapy TCR-T treatment continues to show manageable tolerability with no high-grade CRS and no ICANS; no dose dependent increase of CRS observed
- Proprietary rapid manufacturing process with 7 days of manufacturing time; manufacturing success rate of 94% to reach current recommended Phase 2 dose
- Next data update and pathway towards registration-directed trials planned to be set out in 4Q 2023
- Company well capitalized with cash position[1] of $386m at YE 2022 and reach into 2025 to leverage multi-cancer PRAME opportunity

Houston, Texas and Tuebingen, Germany, May 2, 2023 – Immatics N.V. (NASDAQ: IMTX, "Immatics"), a clinical-stage biopharmaceutical company active in the discovery and development of T cell-redirecting cancer immunotherapies, today announced an interim clinical data update for 11 patients with recurrent and/or refractory solid cancers treated with ACTengine® IMA203 TCR-T monotherapy in the ongoing Phase 1b dose expansion Cohort A. IMA203 TCR-T cells are directed against an HLA-A*02-presented peptide derived from PRAME, a broadly expressed solid cancer target with clinical proof-of-concept for IMA203 demonstrated by

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Immatics in 2022. Overall, IMA203 showed a high rate of deep and durable objective responses, with a confirmed objective response rate of 67% (6/9), across multiple tumor types, including two confirmed partial responses (cPR) ongoing at more than 9 months after treatment and three additional partial responses ongoing at data cut-off. IMA203 monotherapy continues to be well tolerated in heavily pre-treated patients at doses of up to approximately 9 billion CD8+ TCR-T cells. No high-grade cytokine release syndrome (CRS) and no immune effector cell associated neurotoxicity syndrome (ICANS) were observed in Cohort A at data cut-off.

The data will be presented by Martin Wermke, MD, Professor at the University Hospital Dresden and Coordinating Investigator of the ACTengine® IMA203 TCR-T trial during a conference call today, May 2, at 8:30 am EDT / 2:30 pm CEST.

“The treatment of solid cancer patients who have exhausted all available standard of care options remains a significant challenge. These patients typically show fast progressing disease with very poor prognosis,” said Martin Wermke, MD, Coordinating Investigator of the ACTengine® IMA203 TCR-T trial. “It is therefore very encouraging to see that IMA203 is able to provide durable, clinically relevant responses in a variety of solid cancer patients.”

“Today marks a significant step in our efforts towards bringing our ACTengine® IMA203 monotherapy to patients with solid tumors, as we present for the first time longer-term clinical data demonstrating deep and durable responses, some of them ongoing beyond 9 months after treatment,” commented Cedrik Britten, MD, Chief Medical Officer at Immatics. “Furthermore, we show that these responses are agnostic of tumor type and that ACTengine® IMA203 achieved objective responses at widely differing PRAME expression levels. These data further increase our confidence in the success and broad potential of targeting PRAME, and our product candidate IMA203. We continue executing and anticipate announcing a potential fast-to-market pathway for the first 1-2 indications by the end of the year.”

***Safety data for IMA203 TCR-T monotherapy in Phase 1b Cohort A**: Treatment with IMA203 monotherapy continues to show manageable tolerability at doses as high as ~9x10^9 TCR-T cells.*

- At data cut-off on April 4, 2023, 11 PRAME-positive patients were infused with IMA203 TCR-T cells at dose level (DL) 4 or DL5 with a mean total infused dose of 3.67x10^9 TCR-T cells (range 1.30-8.84x10^9 TCR-T cells).
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- 1 PR (synovial sarcoma) ongoing at 6+ weeks

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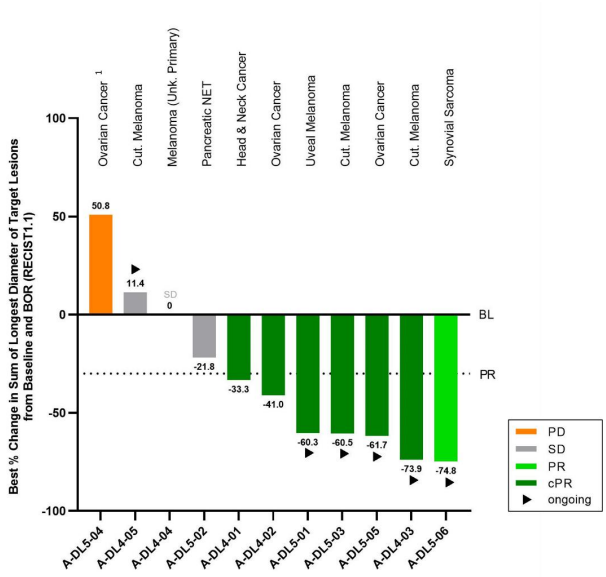
Best Overall Response – Phase 1b Cohort A



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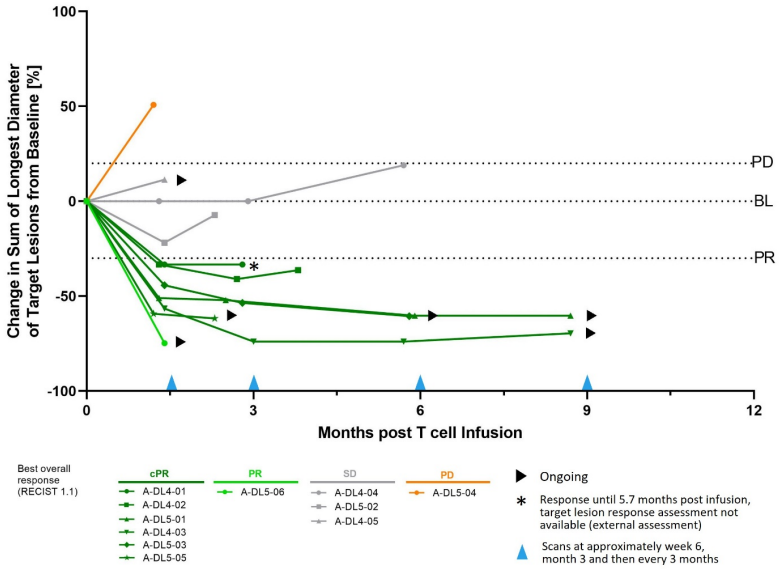
Response over Time – Phase 1b Cohort A



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In addition to ACTengine® TCR-T, Immatics is addressing PRAME-positive cancers with a second therapeutic modality, TCR Bispecifics (TCER®), to leverage the full potential of the multi-cancer opportunity PRAME. Immatics' TCER® IMA402 is a next-generation, half-life extended TCR Bispecific for which Immatics submitted a clinical trial application (CTA[4]) to the Paul-Ehrlich-Institute (PEI) on April 14, 2023, to initiate the Phase 1/2 trial. The trial is expected to commence in 2H 2023 with first clinical data planned in 2024.

Both approaches, ACTengine® and TCER®, are distinct therapeutic modalities that have the potential to provide innovative treatment options for a variety of cancer patient populations with different medical needs. Immatics will continue to evaluate which of these therapeutic modalities (ACTengine® vs. TCER® or both) is best suited for each cancer type.

4 Clinical Trial Application (CTA) is the European equivalent of an Investigational New Drug (IND) application.

Immatics conference call

Immatics will host a conference call today, May 2nd, 2023, at 8:30 am EDT / 2:30 pm CEST to discuss the clinical data. The webcast and presentation can be accessed directly through this link. Participants may also access the slides presented in the webcast on the Immatics website in the Investors section under "Presentations" at www.investors.immatics.com/events-presentations. A replay of the webcast will be made available shortly after the conclusion of the call and archived on Immatics website for at least 90 days.

About IMA203 and target PRAME

ACTengine® IMA203 T cells are directed against an HLA-A*02-presented peptide derived from preferentially expressed antigen in melanoma (PRAME), a protein frequently expressed in a large variety of solid cancers, thereby supporting the program's potential to address a broad cancer patient population. Immatics' PRAME peptide is present at a high copy number per tumor cell and is homogenously and specifically expressed in tumor tissue. The peptide has been identified and characterized by Immatics' proprietary mass spectrometry-based target discovery platform, XPRESIDENT®. Through its proprietary TCR discovery and engineering platform XCEPTOR®, Immatics has generated a highly specific T cell receptor (TCR) against this target for its TCR-based cell therapy approach, ACTengine® IMA203.

ACTengine® IMA203 TCR-T is currently being evaluated in three ongoing Phase 1b dose expansion cohorts in last-line patients: Cohort A IMA203 TCR-T monotherapy, Cohort B IMA203 in combination with an immune checkpoint inhibitor; Cohort B is focused on generating safety data for potential further investigation of a combination approach as a front-line therapy, and Cohort C IMA203CD8 TCR-T monotherapy, where IMA203 engineered T cells are co-transduced with a CD8αβ co-receptor. IMA203CD8 is currently being explored in DL4a (up to $0.8x10^9$ TCR-T cells/m^2 BSA).

About ACTengine®

ACTengine® is a personalized cell therapy approach for patients with advanced solid tumors. The patient's own T cells are genetically engineered to express a novel, proprietary TCR directed against a defined cancer target. The modified T cells are then reinfused into the patient to attack the tumor. The approach is also known as TCR-engineered cell therapy (TCR-T). All Immatics' ACTengine® product candidates can be rapidly manufactured utilizing a proprietary manufacturing process designed to enhance T cell engraftment and persistence *in vivo*.

The ACTengine® T cell products are manufactured at the Evelyn H. Griffin Stem Cell Therapeutics Research Laboratory in collaboration with UTHealth. The ACTengine® Programs are co-funded by the Cancer Prevention and Research Institute of Texas (CPRIT).

- END -

About Immatics
Immatics combines the discovery of true targets for cancer immunotherapies with the development of the right T cell receptors with the goal of enabling a robust and specific T cell response against these targets. This deep know-how is the foundation for our pipeline of Adoptive Cell Therapies and TCR Bispecifics as well as our partnerships with global leaders in the pharmaceutical industry. We are committed to delivering the power of T cells and to unlocking new avenues for patients in their fight against cancer.

Immatics intends to use its website www.immatics.com as a means of disclosing material non-public information. For regular updates you can also follow us on Twitter, Instagram and LinkedIn.

Forward-Looking Statements:
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ACTengine® IMA203 TCR-T Monotherapy Targeting PRAME

– Phase 1b Cohort A Interim Data Update

Martin Wermke, Professor at the University Hospital Dresden and Coordinating Investigator of the ACTengine® IMA203 TCR-T trial

Cedrik Britten, Chief Medical Officer, Immatics

Harpreet Singh, Chief Executive Officer, Immatics

May 02, 2023

Delivering the Power of T cells to Cancer Patients

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Update on IMA203 TCR-T Monotherapy – Phase 1b Cohort A

Delivering a Meaningful Benefit to Patients with an Unmet Need

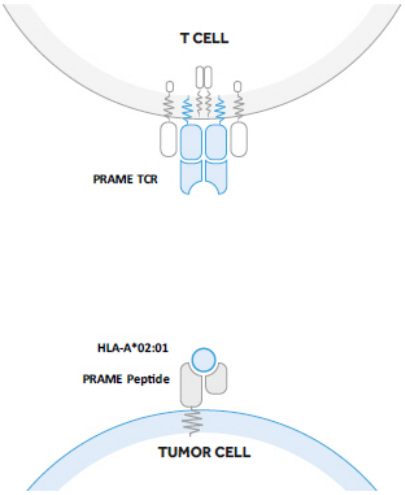
Martin Wermke, MD
Professor at the University Hospital Dresden,
Coordinating Investigator of the
ACTengine® IMA203 TCR-T trial

Cedrik M. Britten, MD
Chief Medical Officer
Immatics

Harpreet Singh, PhD
Chief Executive Officer
Immatics

The Multi-Cancer Opportunity of PRAME

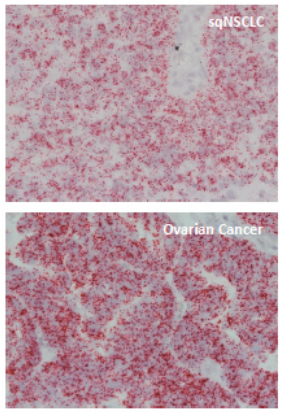
One of the Most Promising Solid Tumor Targets for TCR-based Therapies Known To Date



PRAME fulfills all properties of an ideal target for TCR-based therapies

- High prevalence
- High target density
- Homogeneous expression
- "Clean" expression profile
- Clinical proof-of-concept

PRAME RNA detection in tumor samples (ISH)



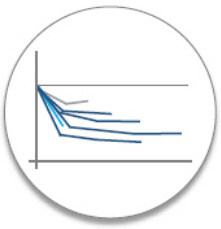
ISH: in situ hybridization, sqNSCLC: squamous non-small cell lung cancer

Unlocking Novel Treatments for Patients with Solid Cancers

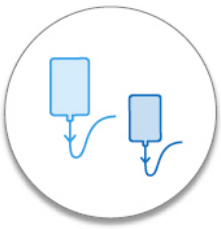
Key Pillars of Developing a Successful TCR-T Product Candidate

Safety

Anti-Tumor Activity



Durability



Product Quality

Broad Reach

Key Pillars of Developing a Successful TCR-T Product Candidate

Summary of Today's Update on IMA203 TCR-T Phase 1b Cohort A

Safety

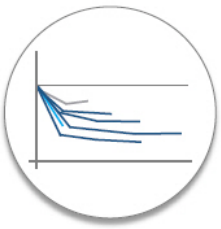
Manageable tolerability at doses as high as ~$9x10^9$ TCR-T cells

Anti-Tumor Activity

High rate of objective responses:

64% (7/11) ORR[1]

67% (6/9) cORR[2]

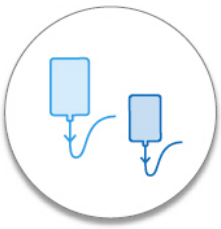


Durability

Ongoing durable responses at 9+ months

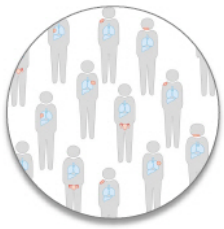
mDOR: Not reached
min 1.3+, max 8.8+

mFU: 8.5 months



Product Quality

Rapid manufacturing time of 7 days (+ 7-day release testing), manufacturing success rate of 94%



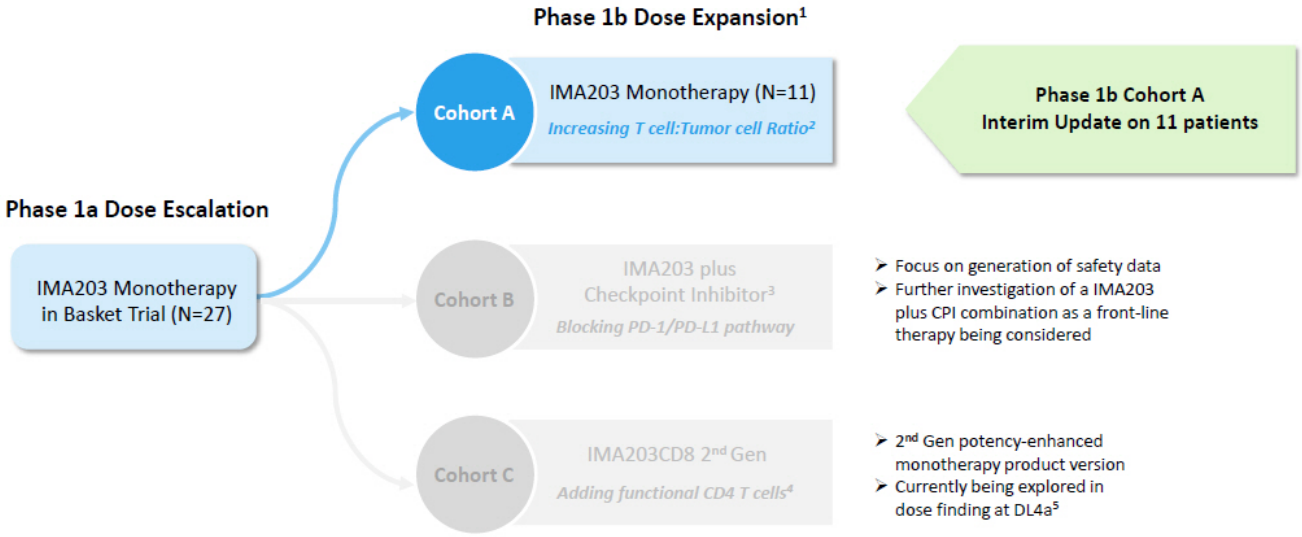
Broad Reach

Confirmed objective responses in broad range of solid cancer types at low, medium and high PRAME levels above threshold

[1] Initial ORR: Objective response rate according to RECIST 1.1 at first scan post infusion at ~week 6; [2] Confirmed ORR (cORR): Confirmed objective response rate according to RECIST 1.1 for patients with available second scan post infusion at ~month 3 or patients with progressive disease (PD) at any timepoint before this scan; mDOR: median duration of response; mFU: median follow-up

ACTengine® IMA203 TCR-T Phase 1 Design

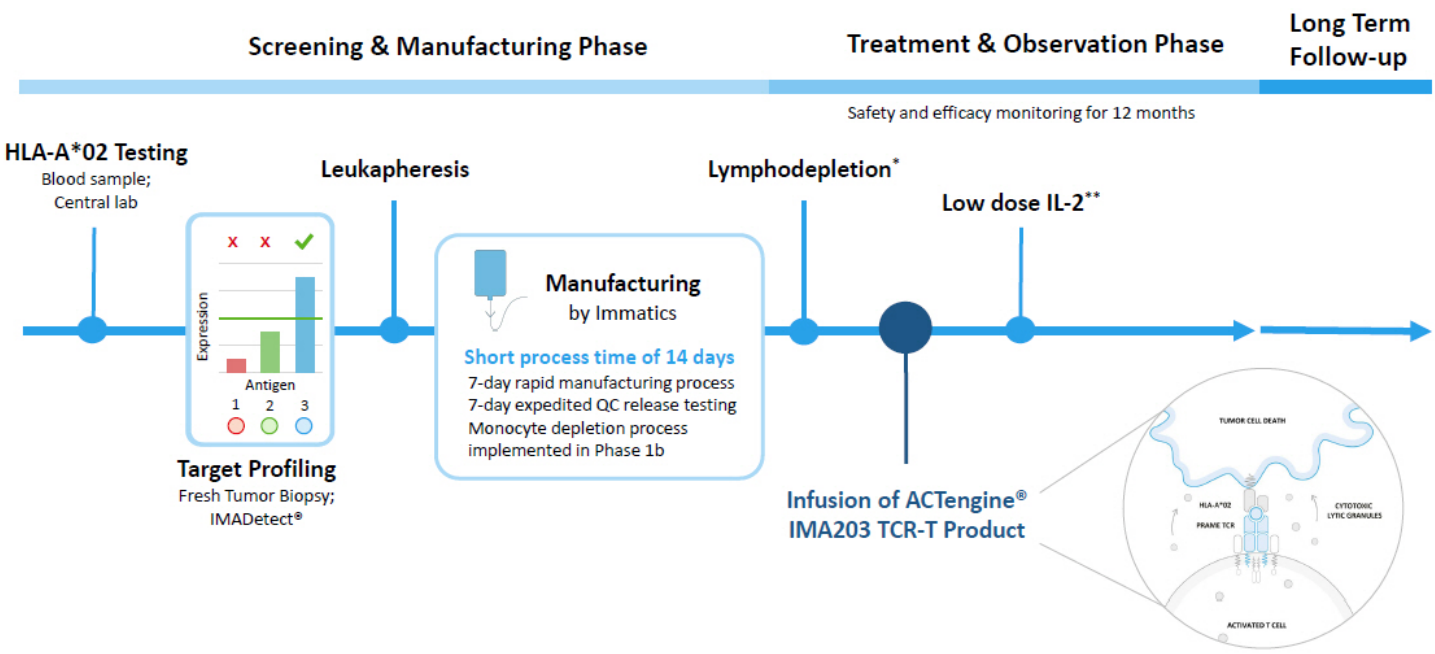
Focus on IMA203 TCR-T Monotherapy Investigated in Cohort A



Data cut-off Apr 04, 2023

[1] Updated target dose (provisional recommended Phase 2 dose, RP2D) determined at DL4+DL5 for Cohort A and B, for Cohort C treatment of n=3 patients at DL3 completed, enrollment at DL4a ongoing before continuation at DL4b and potentially DL5; [2] Demonstrated to be associated with durable response: Locke *et al.* 2020 Blood Advances; [3] Opdivo® (nivolumab): programmed death-1 (PD-1) immune checkpoint inhibitor; [4] Demonstrated to be important for long-term remission: Melenhorst *et al.* 2022 Nature, Bai *et al.* 2022 Science Advances; [5] IMA203CD8 Dose Level 4a: 0.481-0.8x10⁸ transduced viable CD8 T cells/m² BSA

ACTengine® IMA203 TCR-T Monotherapy – Patient Flow



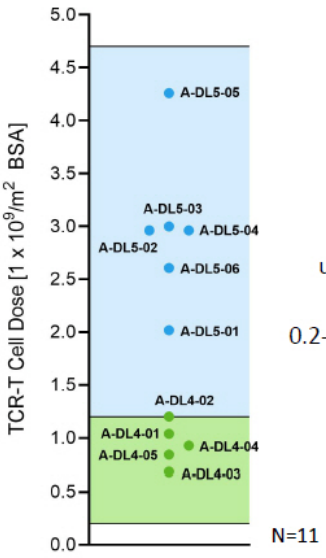
* 30 mg/m² Fludarabine and 500 mg/m² Cyclophosphamide for 4 days; ** 1m IU daily days 1-5 and twice daily days 6-10

ACTengine® IMA203 TCR-T Monotherapy – Phase 1b Cohort A

Patient and Product Characteristics

Patients in Phase 1b Cohort A (N=11)[1]	
Age Mean (min, max)	**55.4** **(31, 79)**
Gender Male / Female [% of patients]	**45.5 / 54.5**
Prior lines of treatment Mean (min, max)	**3.7** **(1, 10)**
LDH at baseline >1 x ULN [% of patients]	**54.5**
Baseline tumor burden Mean target lesion sum of diameter [mm] (min, max)	**73.8** **(21.0, 207.3)**
Total infused dose Mean TCR-T cells[2] infused [x10^9] (min, max)	**3.67** **(1.30, 8.84)**

Heavily pre-treated, metastatic last-line patients that have exhausted all available standard of care treatments



DL5 cleared for safety, updated provisional RP2D comprises DL4 + DL5: 0.2-4.7 x 10^9 TCR-T cells/m^2 BSA

[1] Including ovarian cancer patient A-DL5-04 who erroneously received one dose of nivolumab and is part of intent-to-treat (shown here) but not per-protocol population;
[2] Transduced viable CD8 T cells; ULN: Upper limit of normal; LDH: Lactate dehydrogenase; BSA: Body surface area; RP2D: Recommended Phase 2 Dose

Most Frequent Adverse Events – Phase 1b Cohort A (N=11)

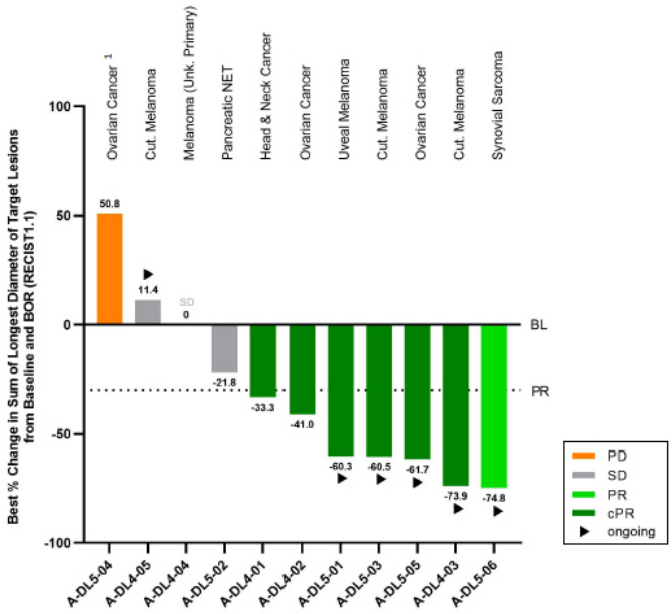
Manageable Treatment-emergent Adverse Events (TEAEs)

- **Expected cytopenia (Grade 1-4)** associated with lymphodepletion in all patients
- **Low-moderate cytokine release syndrome (CRS)** in 91% (10/11) of patients
  - 45% (5/11) of patients had Grade 1 CRS (3 in DL4, 2 in DL5)
  - 45% (5/11) of patients had Grade 2 CRS (2 in DL4, 3 in DL5)
  - No dose-dependent increase of CRS
- **No ICANS[1]**
- **No Dose-limiting toxicity**
- For IMA203 TCR-T monotherapy tolerability profile including Phase 1a dose escalation, see appendix

IMA203 TCR-T monotherapy shows managable tolerability at total doses as high as ~$9x10^9$ TCR-T cells

Best Overall Response – Phase 1b Cohort A

Deep Objective Responses Independent of Tumor Type



ORR (at ~week 6)[2]	64% (7/11)
cORR (at ~month 3)[3]	67% (6/9)

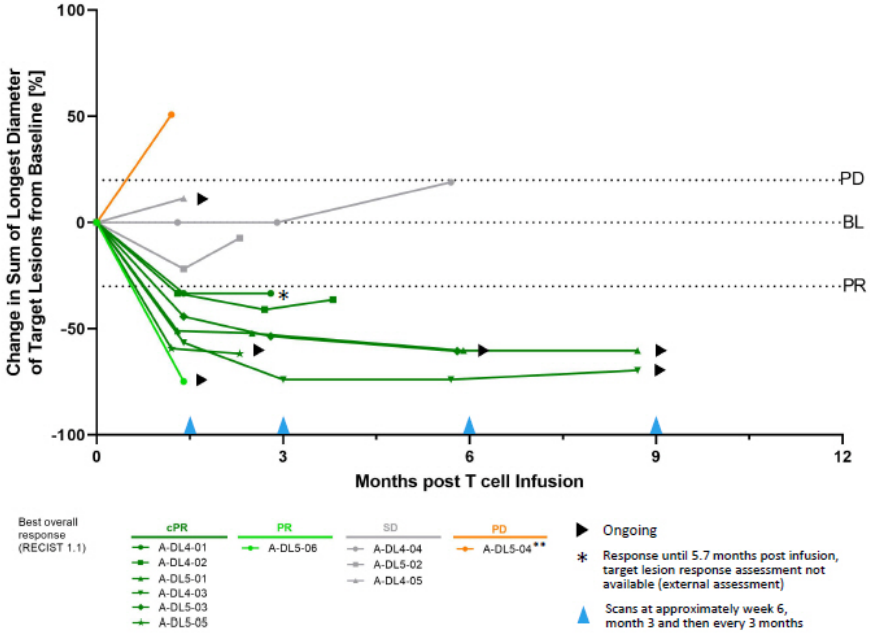
Deep objective responses observed across multiple, heavily pre-treated tumor types

- Responses observed in cutaneous and uveal melanoma, synovial sarcoma, head and neck cancer, and ovarian cancer
- Initial responses at week 6 were confirmed in all 6 responders with available subsequent 3-month scan
- All cut. melanoma patients were CPI-refractory
- All ovarian cancer patients were platinum-resistant

[1] Ovarian cancer patient A-DL5-04 erroneously received one dose of nivolumab and is part of intent-to-treat population (shown here) but not per-protocol population; [2] Initial ORR: Objective response rate according to RECIST 1.1 at first scan post infusion at ~week 6; [3] Confirmed ORR (cORR): Confirmed objective response rate according to RECIST 1.1 for patients with available second scan post infusion at ~month 3 or patients with progressive disease (PD) at any timepoint before this scan; PD: Progressive Disease; SD: Stable Disease; PR: Partial Response; cPR: Confirmed Partial Response; BL: Baseline; BOR: Best Overall Response; NET: Neuroendocrine Tumor; CPI: Checkpoint Inhibitor

Response over Time – Phase 1b Cohort A

Durable Partial Responses 9+ Months after IMA203 TCR-T Treatment



Median DOR[1], min, max DOR	Not reached, 1.3+, 8.8+ months
Median Follow-up[2]	8.5 months

Median time from IMA203 TCR-T infusion to onset of response was 1.4 months

Ongoing responses in 5 of 7 responders:

- 2 cPRs (cut. & uveal melanoma) ongoing at 9+ months
- 1 cPR (cut. melanoma) ongoing at 6+ months
- 1 cPR (ovarian cancer) ongoing at ~3 months
- 1 PR (synovial sarcoma) ongoing at 6+ weeks

**Ovarian cancer patient A-DL5-04 erroneously received one dose of nivolumab and is part of intent-to-treat population (shown here) but not per-protocol population; [1] Duration of response (DOR) in confirmed responders is defined as time from first documented response until disease progression/death. Patients with ongoing response will be censored at date of data cut-off. Median DOR is analyzed by using the Kaplan-Meier method; [2] Median Follow-up is analyzed by using the reverse Kaplan-Meier method; PD: Progressive Disease; SD: Stable Disease; PR: Partial Response; cPR: Confirmed Partial Response; BL: Baseline

Deep & Durable Responses in Heavily Pre-Treated Patients – Phase 1b Cohort A

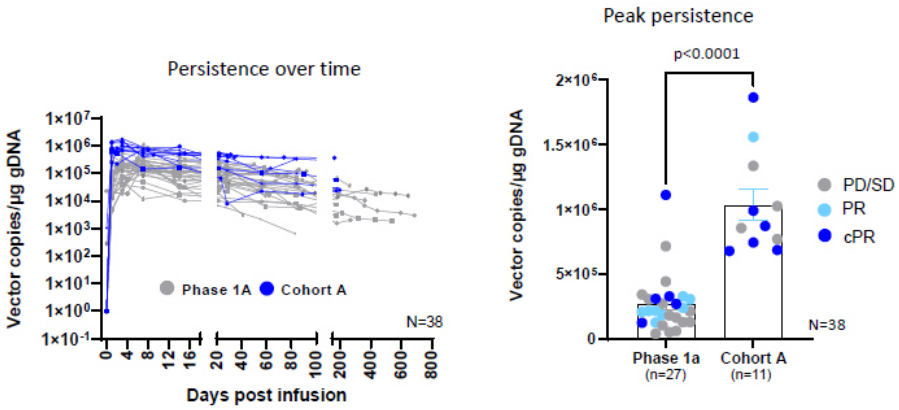
Patient ID	Indication	No of prior treatment lines	Prior treatments	Total infused dose TCR-T cells[1] [x10^9]	BOR	BOR (Max % change of target lesions)	Comment
A-DL5-01	Uveal Melanoma	1	ARRY614/Nivolumab	4.16	cPR	-60.3	Ongoing response 10.1 months post infusion
A-DL4-03	Cut. Melanoma	7	Dabrafenib/Trametinib, Pembrolizumab, Dabrafenib/Trametinib, Vemurafenib/Cobimetinib, Dabrafenib/Trametinib, IMCgp-100, Encorafenib/Binimetinib	1.30	cPR	-73.9	Ongoing response 9.9 months post infusion
A-DL5-03	Cut. Melanoma	3	Interferon, Pembrolizumab, Nivolumab/Ipilimumab	5.12	cPR	-60.5	Ongoing response 6.2 months post infusion
A-DL4-01	Head & Neck Cancer	1	Carboplatin/Paclitaxel	1.92	cPR	-33.3	Response until 5.7 months post infusion
A-DL4-02	Ovarian Cancer	10	Carboplatin/Taxol, Taxol, Gemcitabine/Carboplatin, Olaparib, Letrozole, Rucaparib, UPCC 031118 (CAR-T cell directed folate receptor), Bevacizumab/Cyclophosphamide, Carboplatin, Doxorubicin	1.97	cPR	-41.0	Response until 3.8 months post infusion
A-DL5-05	Ovarian Cancer	3	Adriamycin/Cytotaxan/Taxol, Carboplatin/Taxol, Carboplatin/Doxil	8.84	cPR	-61.7	Ongoing response 2.5 months post infusion
A-DL5-06	Synovial Sarcoma	1	Adriamycin/Ifosfamide/Mesna	3.94	PR	-74.8	Initial PR at week 6, 3-month scan pending
A-DL4-04	Melanoma (Unk. Primary)	2	Nivolumab/Ipilimumab, Nivolumab	1.73	SD	0.0	Disease stabilization until 5.7 months post infusion
A-DL4-05	Cut. Melanoma	5	Nivolumab, Nivolumab (re-exposure), Nivolumab/Ipilimumab, Dabrafenib/Trametinib, Nivolumab	1.63	SD	11.4	Ongoing disease stabilization 2.1 months post infusion
A-DL5-02	Pancreatic Neuroendocrine Tumor	3	Lanreotid, Streptozocin/5-Fluorouracil, Everolismus	5.12	SD	-21.8	Disease stabilization until 2.3 months post infusion
A-DL5-04*	Ovarian Cancer	5	Paclitaxel/Carboplatin, Niraparib, Doxorubicin/Liposomal/Carpoplatin, 2020-0808 ZN-C3/Gemcitabine, 2020-0755 COM 701/BMS-986207/Nivolumab	4.68	PD	50.8	Progressive disease at 1.2 months post infusion

[1] Transduced viable CD8 T cells; PD: Progressive Disease; SD: Stable Disease; PR: Partial Response; cPR: Confirmed Partial Response; BL: Baseline; BOR: Best Overall Response
*Ovarian cancer patient A-DL5-04 erroneously received one dose of nivolumab and is part of intent-to-treat population (shown here) but not per-protocol population.

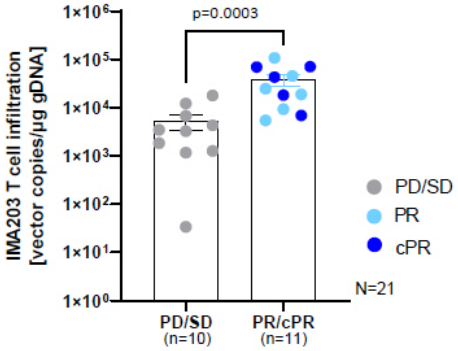
Biological Data Consistent with Clinical Data

IMA203 TCR-T Levels and Tumor Infiltration across Patients in Phase 1a and Phase 1b Cohort A

Increased levels of IMA203 T cells in the blood of patients in Cohort A following increase of cell dose and switch to monocyte depletion process



IMA203 T cells found in all evaluable tumor tissues, level of infiltration associated with objective responses[1]

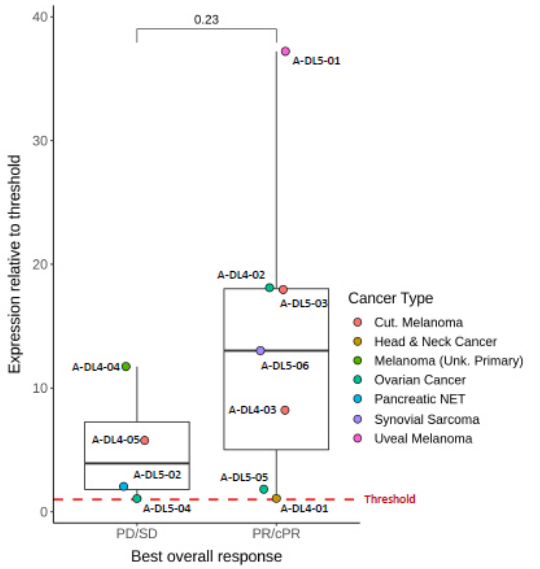


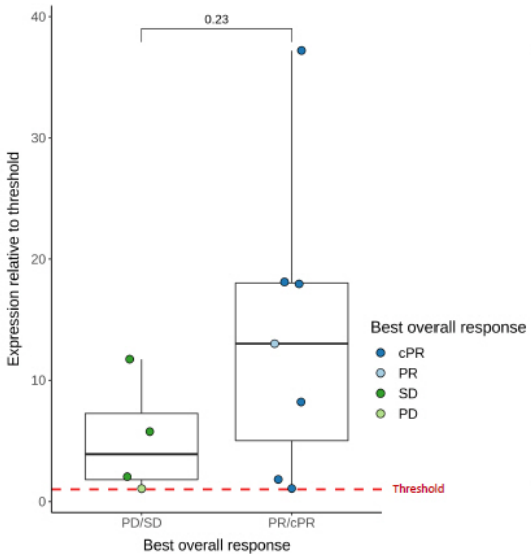
Mann-Whitney U test; [1] T cell infiltration for 21 patients (10 non-responder, 11 responder) with 6-week post infusion biopsy available (1 patient with ~4-week, 2 patients with ~13-week post infusion biopsy); PD: Progressive Disease; SD: Stable Disease; PR: Partial Response; cPR: Confirmed Partial Response

Responses above Immatics' PRAME RNA Threshold Independent of Tumor Type

Highlighting Tumor Types (left) and Type of Best Overall Response (right) – Phase 1b Cohort A

PRAME RNA expression in pre-treatment biopsies relative to threshold





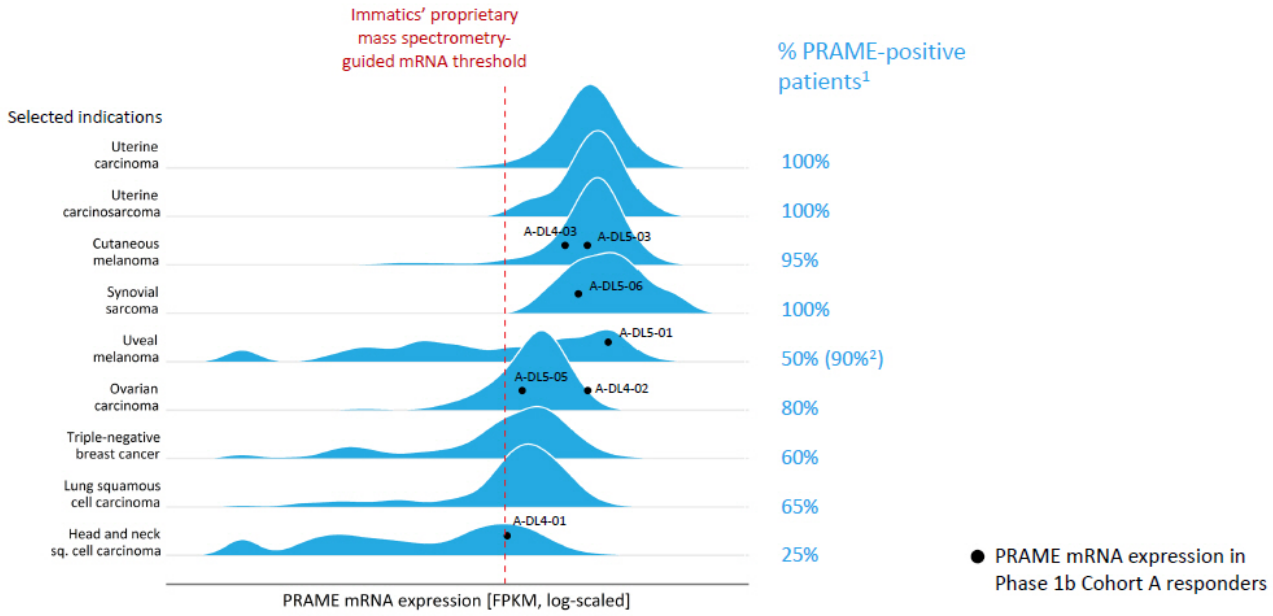
IMA203 achieved objective responses at <u>all</u> expression levels above Immatics' mass spectrometry-guided RNA threshold

IMA203 has the potential to provide clinical benefit for all PRAME biomarker-positive cancer patients

Mann-Whitney U test, p=0.23; PD: Progressive Disease; SD: Stable Disease; PR: Partial Response; cPR: Confirmed Partial Response; NET: Neuroendocrine Tumor

Potential of IMA203 in Additional Solid Cancer Indications

Based on PRAME Expression in IMA203 TCR-T Responders – Phase 1b Cohort A



PRAME target expression distribution (blue histogram) based on TCGA RNAseq data, patient data (black dots) based on IMADetect® qPCR testing of screening biopsies; [1] PRAME target prevalence is based on TCGA RNAseq data combined with a proprietary MS-guided RNA expression threshold; [2] PRAME target prevalence in uveal melanoma based on IMADetect® qPCR testing of screening biopsies from clinical trial patients (n=21) demonstrates substantial higher prevalence of 90% compared to prevalence based on TCGA data of 50%, TCGA: early & late-stage primary tumor samples, Immatics clinical trials: late-stage/metastatic tumor samples, Role of PRAME in metastasis of uveal melanoma: Field *et al.* 2016 Clinical Cancer Research; MS: mass spectrometry

ACTengine® IMA203 TCR-T Monotherapy Targeting PRAME

Summary of Phase 1b Cohort A Interim Data Update

- **Manageable tolerability** with no high-grade CRS, no ICANS in 11 patients in Cohort A[1]
- **Objective responses observed in heavily pre-treated last-line solid cancer patients** including checkpoint-refractory cutaneous melanoma, platinum-resistant ovarian cancer, uveal melanoma, head and neck cancer, synovial sarcoma
- **High objective response rate (ORR):**
  - 64% (7/11) ORR (at ~week 6)
  - 67% (6/9) cORR (at ~month 3)
- **Ongoing durable responses:**
  - Median duration of response not reached at a median follow-up time of 8.5 months
  - Ongoing PRs 9+ months after IMA203 TCR-T treatment
- **Objective responses independent of tumor type at low, medium and high PRAME levels above threshold**
- **Manufacturing success rate of 94%** to reach current RP2D, **rapid 7-day manufacturing process (+7-day release testing)**

Increased confidence in the success and broad potential of targeting PRAME and our product candidate IMA203 TCR-T

[1] For IMA203 TCR-T monotherapy tolerability profile including Phase 1a dose escalation, see appendix;
CRS: Cytokine Release Syndrome; ICANS: Immune effector cell-associated neurotoxicity syndrome; RP2D: provisional recommended Phase 2 dose

Immatics' ACTengine® IMA203 TCR-T Development Strategy

Two Pillared Strategy

FAST & FOCUSED

Objective: Deliver best-in-class therapy in 1-2 last-line solid cancer types as fast as possible

- Focus on indications with PRAME prevalence above 80% with available clinical PoC, such as cut. melanoma (potentially bundled with uveal melanoma) and ovarian cancer
- Highly modular and scalable manufacturing facility expected to be operational in 2024 to support efforts to maximize speed to market
- Planned start of a first Phase 2 trial in 1H 2024 – targeted to be already registration-directed

GO BROAD

Objective: Expand development to other cancer types

- Signal finding in other cancer types with a broad patient reach, such as uterine cancer, lung cancer, breast cancer, head and neck cancer

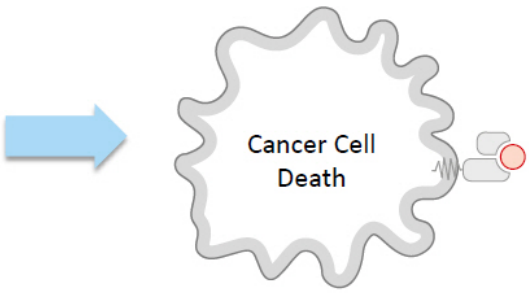
Update on all three IMA203 Phase 1b cohorts and clinical development path towards registration-directed trials and potential commercialization for PRAME TCR-T monotherapy is planned for 4Q 2023

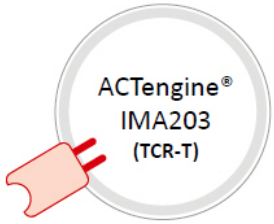
Realizing the Full Multi-Cancer Opportunity of PRAME

ACTengine® IMA203 (TCR-T) and TCER® IMA402 (TCR Bispecific)

Indication	% PRAME positive patients[1]
Uterine Carcinoma	100%
Uterine Carcinosarcoma	100%
Sarcoma Subtypes	up to 100%
Cut. Melanoma	95%
Uveal Melanoma[2]	90%
Ovarian Carcinoma	80%
Squamous NSCLC	65%
TNBC	60%
Small Cell Lung Cancer	55%
Kidney Carcinoma	up to 45%
Cholangiocarcinoma	35%
Adeno NSCLC	25%
Breast Carcinoma	25%
HNSCC	25%
Esophageal Carcinoma	20%
HCC	20%
Bladder Carcinoma	20%

PRAME is one of the most promising and most prevalent, clinically validated solid tumor targets known to date





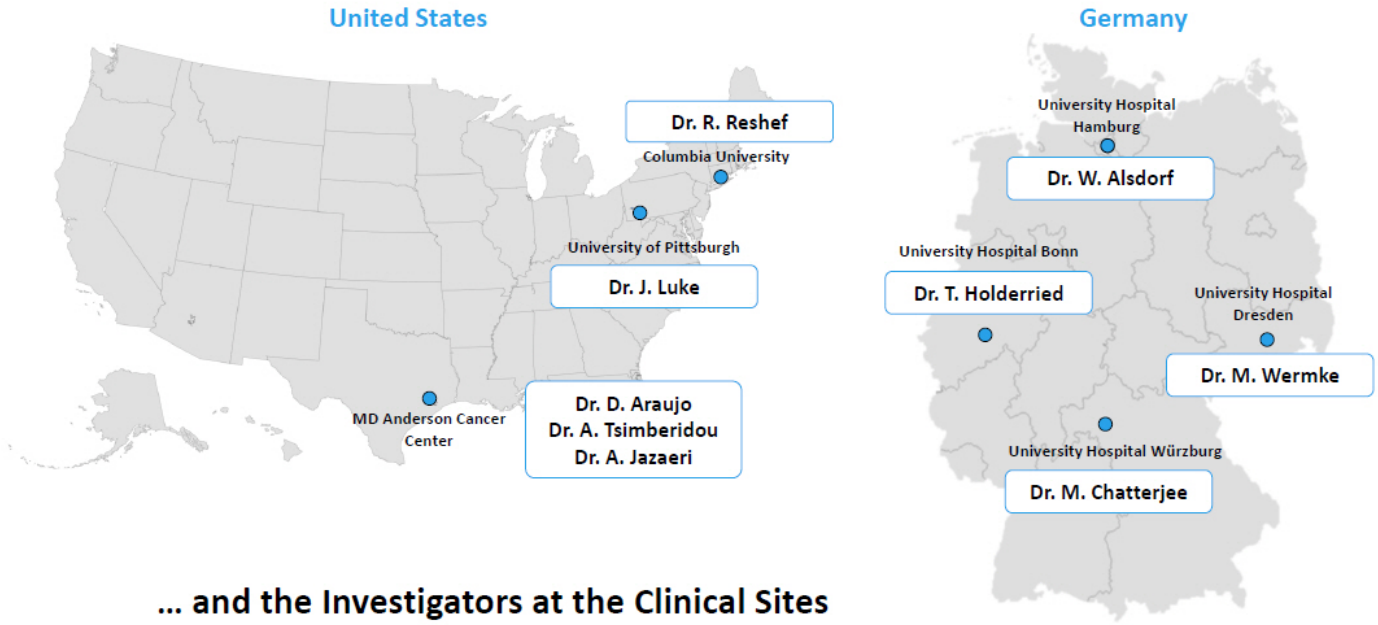
TCER® IMA402
(TCR Bispecific)

- ✓ CTA submitted
- ✓ Start of clinical trial planned in 2H 2023
- ✓ First clinical data 2024

Leverage the full potential of targeting PRAME by continued evaluation of the best suited therapeutic modality (ACTengine® vs. TCER® or both) for each cancer type

[1] PRAME target prevalence is based on TCGA (for SCLC: in-house) RNAseq data combined with a proprietary mass spec-guided RNA expression threshold; [2] Uveal melanoma target prevalence is based on IMADetect® qPCR testing of screening biopsies from clinical trial patients (n=21); NSCLC: Non-small cell lung cancer, TNBC: Triple-negative breast cancer, HNSCC: Head and neck squamous cell carcinoma; HCC: Hepatocellular carcinoma

We are Immensely Grateful to the Patients, Their Families …



… and the Investigators at the Clinical Sites

Delivering

the Power of T cells to Cancer Patients

Appendix

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ACTengine® IMA203 TCR-T 1st Gen Monotherapy Tolerability Data

Phase 1a and Phase 1b Cohort A – All ≥Grade 3 Adverse Events (N=39)

TEAEs by maximum severity for all patients in Ph1a dose escalation and Ph1b Cohort A dose expansion (N=39)[1]

Adverse event (System organ class, Preferred term)	≥ Grade 3 No.	≥ Grade 3 %
Patients with any adverse event	39	100.0
Adverse Events of Special Interest		
Cytokine release syndrome	2	5.1
ICANS[2]	0	0.0
Blood and lymphatic system disorders		
Neutropenia	32	82.1
Lymphopenia	24	61.5
Leukopenia	22	56.4
Anaemia	20	51.3
Thrombocytopenia	15	38.5
Cytopenia	1	2.6
Leukocytosis	1	2.6
Lymphocytosis	1	2.6
Infections and infestations		
Appendicitis	1	2.6
COVID-19	1	2.6
Enterococcal infection	1	2.6
Infection	1	2.6
Orchitis	1	2.6
Sepsis[4,5]	1	2.6
Septic shock[4]	1	2.6
Respiratory, thoracic and mediastinal disorders		
Hypoxia	2	5.1
Bronchial obstruction	1	2.6
Laryngeal inflammation	1	2.6
Pleural effusion	1	2.6
Respiratory failure	1	2.6
Investigations		
Alanine aminotransferase increased	1	2.6
Aspartate aminotransferase increased	1	2.6
Blood alkaline phosphatase increased	1	2.6
Blood creatinine increased	1	2.6
Blood fibrinogen decreased	1	2.6
Gastrointestinal disorders		
Abdominal pain	1	2.6
Diarrhoea	1	2.6
Ileus	1	2.6
Vomiting	1	2.6

Adverse event (System organ class, Preferred term)	≥ Grade 3 No.	≥ Grade 3 %
table continued…		
General disorders and administration site conditions		
Condition aggravated[4]	1	2.6
Fatigue	1	2.6
Pyrexia	1	2.6
Swelling face	1	2.6
Vascular disorders		
Hypertension	3	7.7
Hypotension	1	2.6
Metabolism and nutrition disorders		
Hypokalaemia	2	5.1
Failure to thrive	1	2.6
Injury, poisoning and procedural complications		
Humerus fracture	1	2.6
Infusion related reaction	1	2.6
Renal and urinary disorders		
Acute kidney injury	1	2.6
Proteinuria	1	2.6
Cardiac disorders		
Atrial fibrillation[3]	1	2.6
Endocrine disorders		
Inappropriate antidiuretic hormone secretion	1	2.6
Eye disorders		
Ulcerative keratitis	1	2.6
Hepatobiliary disorders		
Cholangitis	1	2.6
Immune system disorders		
Contrast media allergy	1	2.6
Musculoskeletal and connective tissue disorders		
Muscle spasms	1	2.6
Nervous system disorders		
Headache	1	2.6
Reproductive system and breast disorders		
Vaginal haemorrhage	1	2.6
Skin and subcutaneous tissue disorders		
Rash maculo-papular	1	2.6

- IMA203 was well tolerated
- No Adverse Event ≥Grade 3 was observed with a frequency ≥10% when excluding expected cytopenias associated with lymphodepletion
- No IMA203-related Grade 5 Adverse Events

All treatment-emergent adverse events (TEAEs) with ≥ Grade 3 regardless of relatedness to study treatment that occurred in at least 1 patient (except for ICANS, where only Grade 1-2 occurred; listed for completeness due to being an adverse event of special interest) are presented. Adverse events were coded using the Medical Dictionary for Regulatory Activities. Grades were determined according to National Cancer Institute Common Terminology Criteria of Adverse Events, version 5.0. Grades for CRS and ICANS were determined according to CARTOX criteria (Neelapu et al., 2018). Patients are counted only once per adverse event and severity classification. Based on interim data extracted from open clinical database (04-Apr-2023); [1] Two patients with disease progression after first IMA203 infusion received exploratory second IMA203 infusion. They had these ≥ Grade 3 TEAEs only after second infusion, which are included in the table: First patient: Abdominal pain, Cytokine release syndrome, Diarrhoea, Hypokalaemia, Proteinuria; Second patient: Humerus fracture, Muscle spasms, Neutropenia, Thrombocytopenia; [2] ICANS: Immune effector cell-associated neurotoxicity syndrome; [3] DLT: Dose limiting toxicity in phase 1a at DL2 reported on March 17, 2021; [4] Fatal Adverse events were not considered related to any study drug; [5] Patient died from sepsis of unknown origin and did not receive IMA203 TCR-T cells.

ACTengine® IMA203 TCR-T 1st Gen Monotherapy Tolerability Data

Focus on IMA203 Phase 1b Cohort A – All ≥Grade 3 Adverse Events (N=11)

TEAEs by maximum severity for all patients in Ph1b Cohort A dose expansion (N=11)

Adverse event (System organ class, Preferred term)	≥ Grade 3 No.	≥ Grade 3 %
Patients with any adverse event	**11**	**100.0**
Adverse Events of Special Interest		
Cytokine release syndrome	0	0.0
ICANS[1]	0	0.0
Blood and lymphatic system disorders		
Neutropenia	10	90.9
Lymphopenia	6	54.5
Leukopenia	5	45.5
Anaemia	5	45.5
Thrombocytopenia	4	36.4
Leukocytosis	1	9.1
Lymphocytosis	1	9.1

Adverse event (System organ class, Preferred term)	≥ Grade 3 No.	≥ Grade 3 %
table continued…		
Investigations		
Alanine aminotransferase increased	1	9.1
Aspartate aminotransferase increased	1	9.1
Blood alkaline phosphatase increased	1	9.1
Eye disorders		
Ulcerative keratitis	1	9.1
Gastrointestinal disorders		
Ileus	1	9.1
Infections and infestations		
Infection	1	9.1
Nervous system disorders		
Headache	1	9.1
Respiratory, thoracic and mediastinal disorders		
Laryngeal inflammation	1	9.1

All treatment-emergent adverse events (TEAEs) with ≥ Grade 3 regardless of relatedness to study treatment that occurred in at least 1 patient (except for CRS and ICANS, where only Grade 1-2 occurred; listed for completeness due to being adverse events of special interest) are presented. Adverse events were coded using the Medical Dictionary for Regulatory Activities. Grades were determined according to National Cancer Institute Common Terminology Criteria of Adverse Events, version 5.0. Grades for CRS and ICANS were determined according to CARTOX criteria (Neelapu *et al.*, 2018). Patients are counted only once per adverse event and severity classification. Based on interim data extracted from open clinical database (04-Apr-2023). [1] ICANS: Immune effector cell-associated neurotoxicity syndrome.

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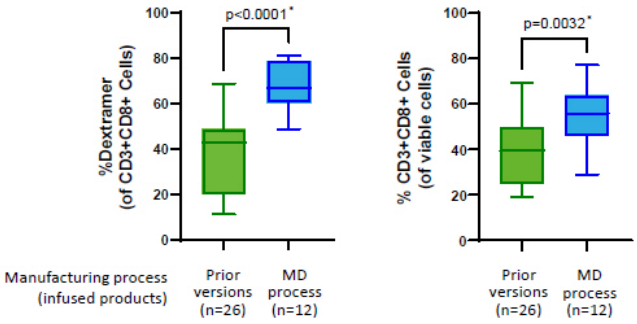
- No IMA203-related Grade 5 Adverse Events

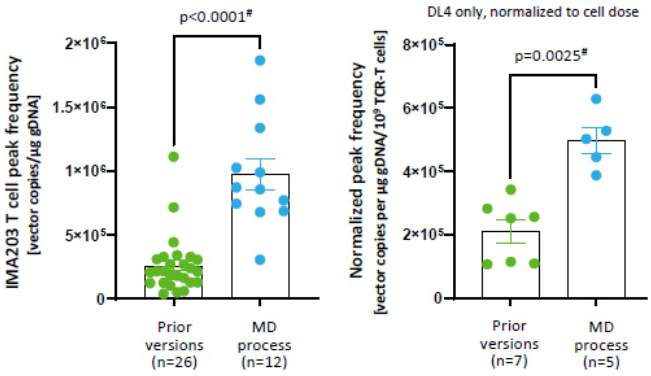
Favorable TCR-T Product Characteristics and High TCR-T Levels in Patients

Manufacturing Improvements Implemented in Phase 1b Enhance Key Features of the Cell Product

Improved TCR-T product features



Increased peak TCR-T levels in patients



Manufacturing success rate of 94% to reach provisional RP2D**

Mean cell dose infused in 11 patients in Phase 1b Cohort A was 3.67×10^9 TCR-T cells

MD process: Monocyte depletion process; * Unpaired t test; # Mann-Whitney U test;
** Updated provisional RP2D comprises DL4 + DL5: 0.2-4.7x10⁸ transduced viable CD8 T cells/m² BSA;

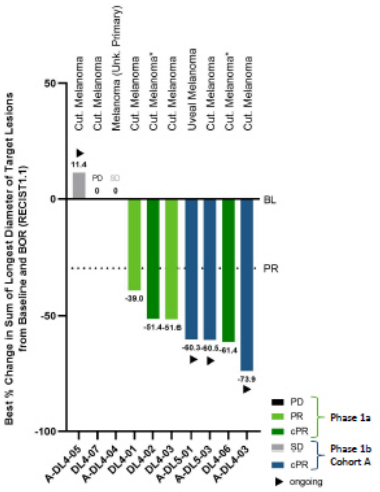
Focus on Melanoma Patients Phase 1a (DL4 only) and Phase 1b Cohort A

Continuous Improvement from Phase 1a to Phase 1b Cohort A

Patient Characteristics (n=10)	
Prior lines of treatment Mean (min, max)	4.5 (1, 7)
Previous lines of CPI Mean (Min, Max)	2.6 (1, 4)
LDH at baseline >1 x ULN [% of patients]	60.0
Baseline tumor burden Mean target lesion sum of diameter [mm] (min, max)	66.9 (21.0, 178.7)
Total infused dose Mean TCR-T cells[1] infused [$x10^9$] (min, max)	2.12 (1.07, 5.12)
No. of Target- & Non-Target Lesions	60.0% with >3 lesions 40.0% with liver/brain lesions

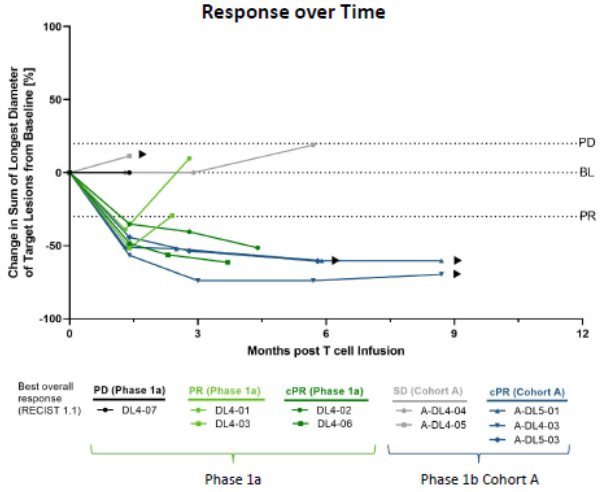
- Heavily pre-treated melanoma patients after 1-4 lines of CPI: Cutaneous (N=8), uveal (N=1) and melanoma of unk. primary (N=1)
- Phase 1a (N=5): previous manufacturing process
- Phase 1b Cohort A (N=5): new monocyte depletion process, higher dose

Best Overall Response



ORR[2] = 70% (7/10)
cORR[3] = 56% (5/9)

Response over Time



Median DOR[4], min, max DOR	Not reached, 2.4, 8.8+ months
Median Follow-up[5]	8.5 months

* Maximum change of target lesions and RECIST 1.1 at different timepoints. [1] Transduced viable CD8 T cells; [2] Initial ORR: Objective response rate according to RECIST 1.1 at first scan post infusion at ~week 6; [3] Confirmed ORR (cORR): Confirmed objective response rate according to RECIST 1.1 for patients with available second scan post infusion at ~3 months or patients with progressive disease (PD) at any timepoint before this scan; [4] Duration of response (DOR) in confirmed responders is defined as time from first documented response until disease progression/death. Patients with ongoing response will be censored at date of data cut-off. Median DOR is analyzed by using the Kaplan-Meier method; [5] Median Follow-up is analyzed by using the reverse Kaplan-Meier method; PD: Progressive Disease; SD: Stable Disease; PR: Partial Response; cPR: Confirmed Partial Response; BOR: Best Overall Response; BL: Baseline; CPI: Checkpoint inhibitor; LDH: Lactate dehydrogenase

Delivering

the Power of T cells to Cancer Patients

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Immatics Corporate Presentation

May 2, 2023

Delivering the Power of T cells to Cancer Patients

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Building a Leading TCR Therapeutics Company

Two Clinical-Stage Modalities

Pipeline of TCR-T and TCR Bispecific product candidates in clinical & preclinical development

Clinical PoC for Cell Therapy

Anti-tumor activity and durability of response across multiple solid tumors in early TCR-T clinical development

Differentiated Platforms

Unique technologies to identify true cancer targets and right TCRs

Therapeutic Opportunity

Potential for addressing large patient populations with high prevalence targets in solid tumors

Our Near-Term Focus – Clinical Development of Our Lead Assets from Our Autologous TCR-T (ACTengine®) and TCR Bispecifics (TCER®) Pipeline

ACTengine® IMA203 (PRAME)

Three IMA203 Ph1b cohorts
- IMA203 monotherapy
- Checkpoint combo
- IMA203CD8 monotherapy

Next update on all three IMA203 cohorts and clinical development path for PRAME TCR-T monotherapy towards registration-directed trials is planned for 4Q 2023

TCER® IMA401 (MAGEA4/8)

Advance ongoing Phase 1 clinical trial

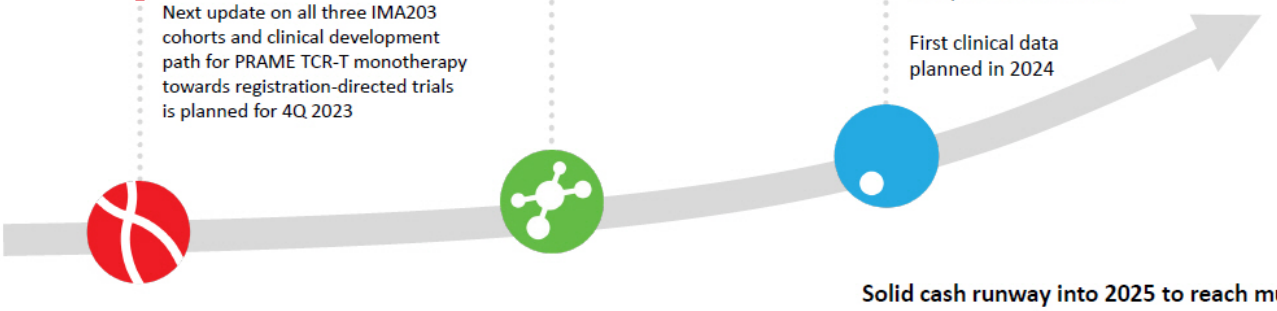
Establish clinical PoC

TCER® IMA402 (PRAME)

CTA[1] application submitted on April 14, 2023

Start of Phase 1/2 clinical trial planned in 2H 2023

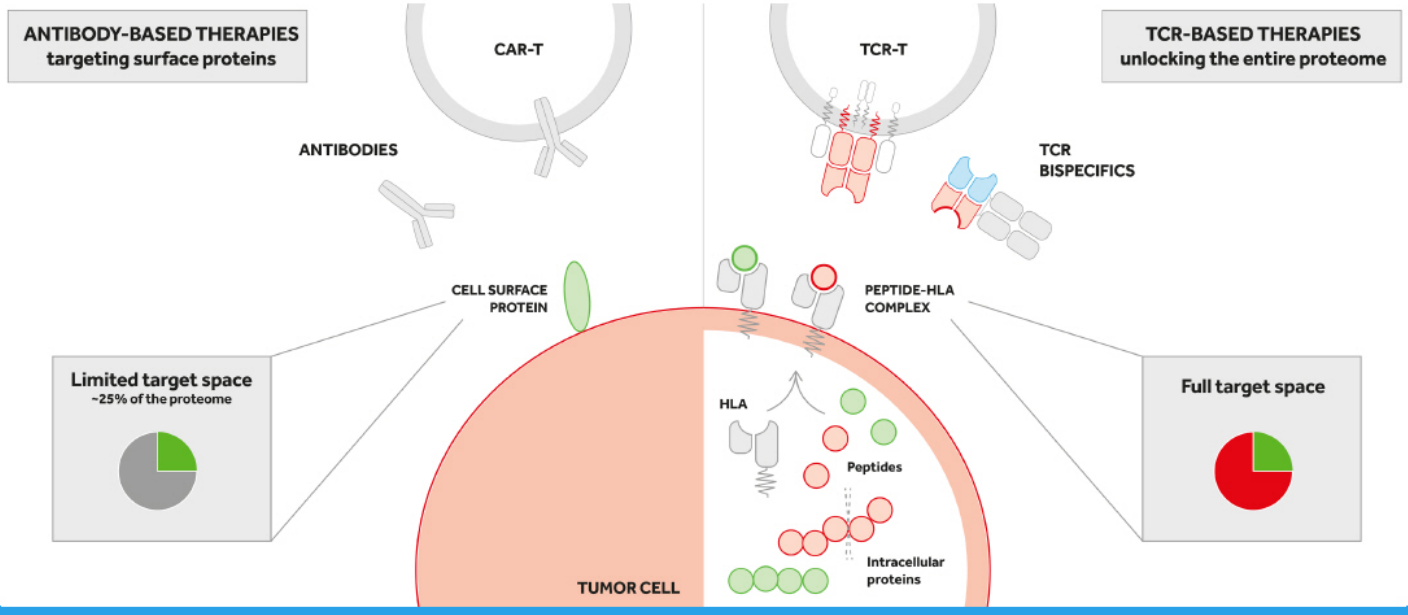
First clinical data planned in 2024



Solid cash runway into 2025 to reach multiple value inflections points across our portfolio

[1] Clinical Trial Application (CTA) is the European equivalent of an Investigational New Drug (IND) application

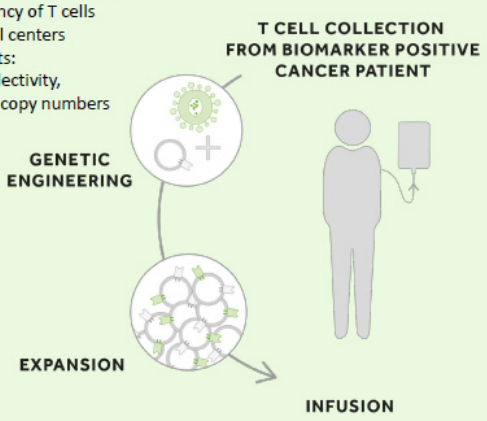
Our TCR-based Approaches Leverage the Full Target Space beyond the Cancer Cell Surface



Two Distinct TCR-based Therapeutic Modalities in Clinical Development

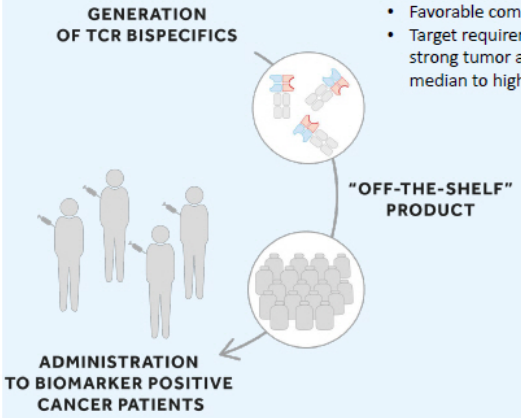
Autologous TCR-T (ACTengine®)

- Strong clinical activity in patients with high tumor burden[1]
- Single dose[2]
- Proprietary manufacturing process for enhanced potency of T cells
- Specialized medical centers
- Target requirements: stringent tumor selectivity, low, medium, high copy numbers



TCR Bispecifics (TCER®)

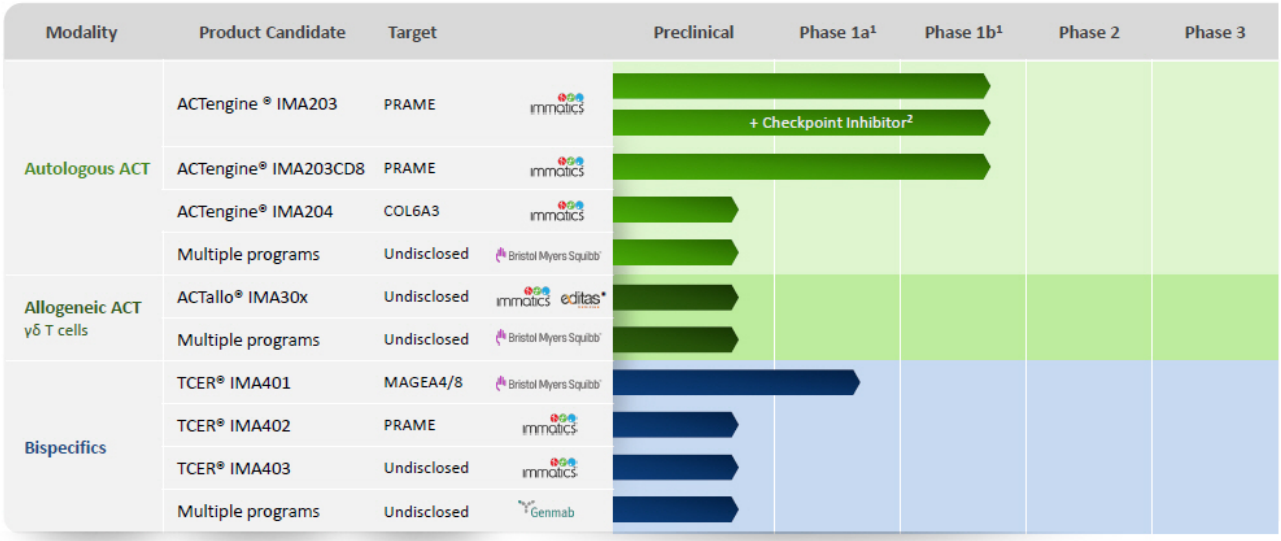
- Off-the-shelf biologic for immediate treatment
- Repeat dosing
- All hospitals and out-patient, opportunity for larger patient reach
- Favorable commercial characteristics
- Target requirements: strong tumor association, median to high copy numbers



Differentiated positioning of ACTengine® vs. TCER® based on patient population and medical need

[1] Interim data update from the ACTengine® IMA203 TCR-T Phase 1 trial with a 50% (6/12) confirmed ORR target dose or above with at least 1 billion infused TCR-T cells across several solid tumor indications, 80% (4/5) confirmed ORR in Phase 1b patients only; [2] Initial manufacturing may provide sufficient quantity for potential repeat dosing.

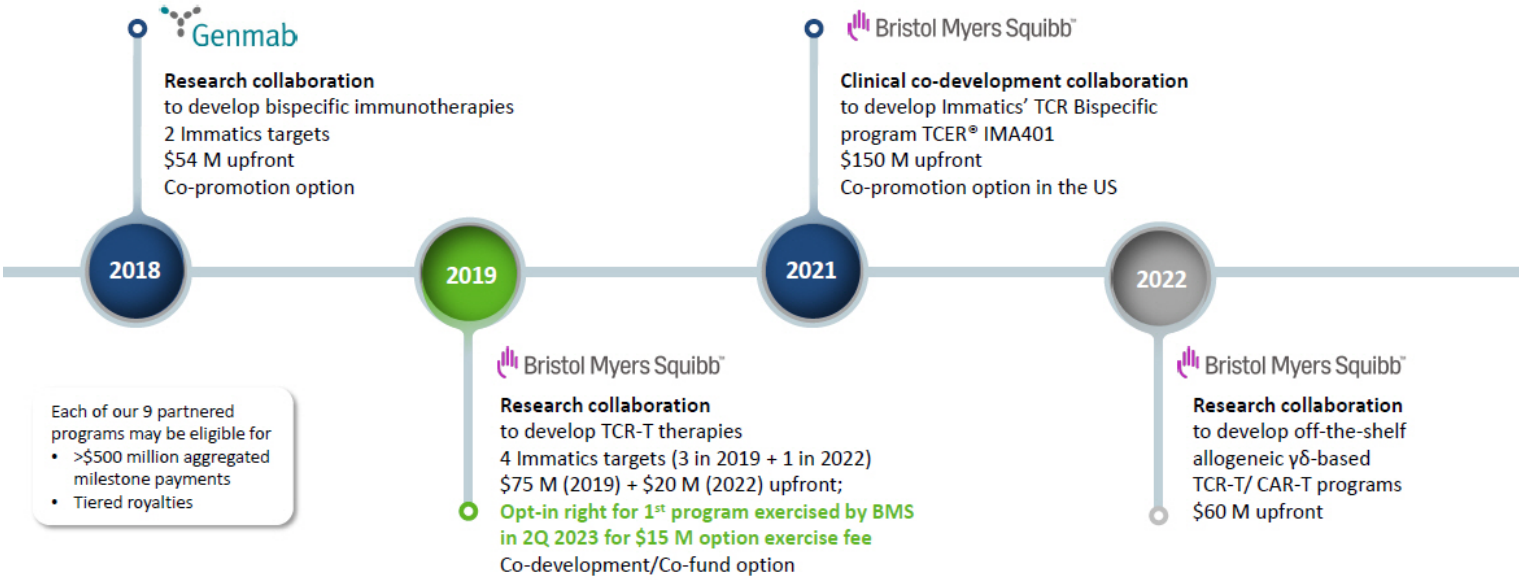
Our Pipeline of TCR-based Adoptive Cell Therapies and Bispecifics



[1] Phase 1a: Dose escalation, Phase 1b: Dose expansion; [2] Opdivo® (nivolumab): programmed death-1 (PD-1) immune checkpoint inhibitor;
* Immatics proprietary ACTallo® platform utilizing Editas' CRISPR gene editing technology

Strategic Collaborations

Synergistic Expertise that Can Foster Transformative Innovations for ACT and Bispecifics



Broadening the clinical framework beyond our pipeline

Potential for Large Patient Populations across Multiple Solid Cancers

IMA203 / IMA402
PRAME

Uterine Carcinoma – 100%
Sarcoma Subtypes – up to 100%
Cut. Melanoma – 95%
Uveal Melanoma[1] – 90%
Ovarian Carcinoma – 80%
Squamous NSCLC – 65%
TNBC – 60%
Small Cell Lung Cancel – 55%
Kidney Carcinoma – up to 45%
Cholangiocarcinoma – 35%
Adeno NSCLC – 25%
Breast Carcinoma– 25%
HNSCC – 25%
Esophageal Carcinoma – 20%
HCC – 20%
Bladder Carcinoma – 20%

IMA401
MAGEA4/8

Sarcoma Subtypes – up to 80%
Squamous NSCLC – 50%
HNSCC – 35%
Bladder Carcinoma – 30%
Esophageal Carcinoma – 25%
Uterine Carcinosarcoma – 25%
Ovarian Carcinoma – 20%
Melanoma – 20%

IMA204
COL6A3 Exon 6

Pancreatic Carcinoma – 80%
Breast Carcinoma – 75%
Stomach Carcinoma – 65%
Sarcoma – 65%
Esophageal Carcinoma – 60%
Squamous NSCLC– 55%
Adeno NSCLC– 55%
HNSCC – 55%
Uterine Carcinosarcoma – 55%
Colorectal Carcinoma – 45%
Mesothelioma – 45%
Cholangiocarcinoma – 40%
Ovarian Carcinoma – 40%
Melanoma – 35%
Bladder Carcinoma – 35%

ACTengine® and TCER® targets demonstrate high prevalence in multiple solid cancers

Target prevalence for selected solid cancer indications are based on TCGA (for SCLC: in-house) RNAseq data combined with a proprietary mass spec-guided RNA expression threshold;
[1] Uveal melanoma target prevalence is based on IMADetect® qPCR testing of screening biopsies from clinical trial patients (n=21)

Realizing the Full Multi-Cancer Opportunity of PRAME

ACTengine® IMA203 (TCR-T) and TCER® IMA402 (TCR Bispecific)

Indication	% PRAME positive patients[1]
Uterine Carcinoma	100%
Uterine Carcinosarcoma	100%
Sarcoma Subtypes	up to 100%
Cut. Melanoma	95%
Uveal Melanoma[2]	90%
Ovarian Carcinoma	80%
Squamous NSCLC	65%
TNBC	60%
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Kidney Carcinoma	up to 45%
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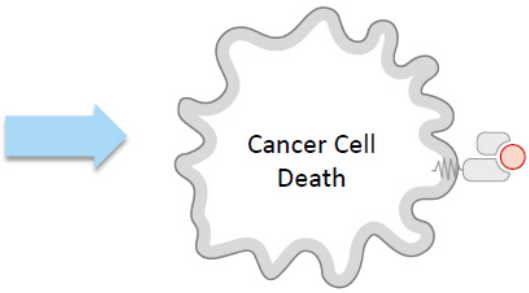
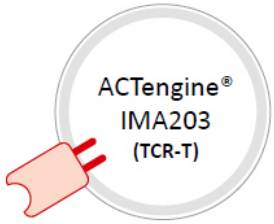
Adeno NSCLC	25%
Breast Carcinoma	25%
HNSCC	25%
Esophageal Carcinoma	20%
HCC	20%
Bladder Carcinoma	20%

PRAME is one of the most promising and most prevalent, clinically validated solid tumor targets known to date





TCER® IMA402
(TCR Bispecific)

- ✓ CTA submitted
- ✓ Start of clinical trial planned in 2H 2023
- ✓ First clinical data 2024

Leverage the full potential of targeting PRAME by continued evaluation of the best suited therapeutic modality (ACTengine® vs. TCER® or both) for each cancer type

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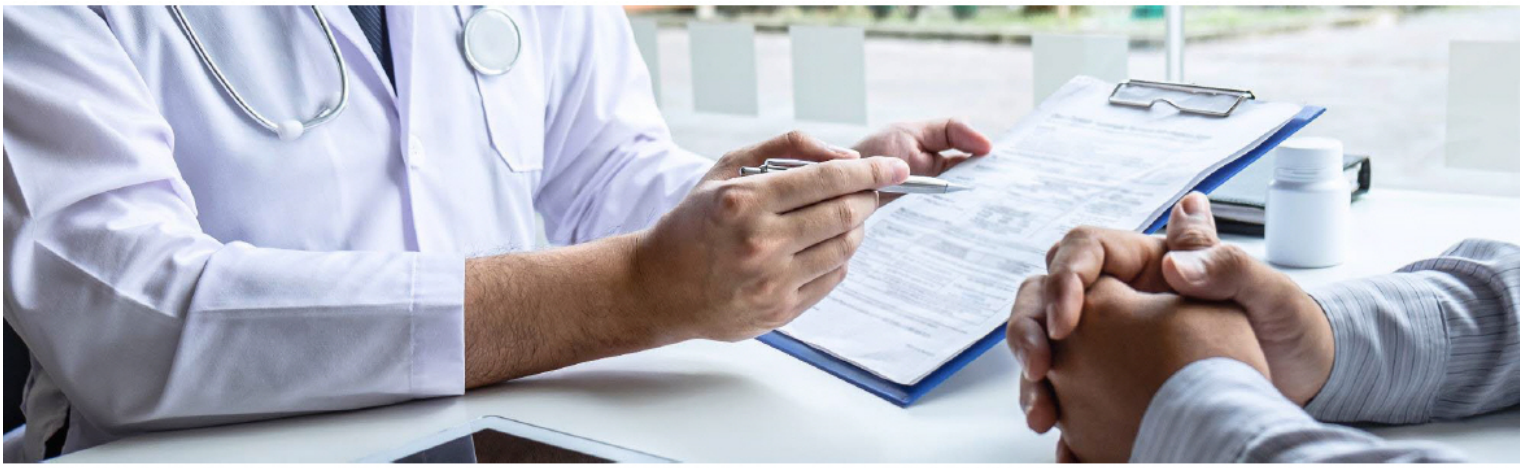
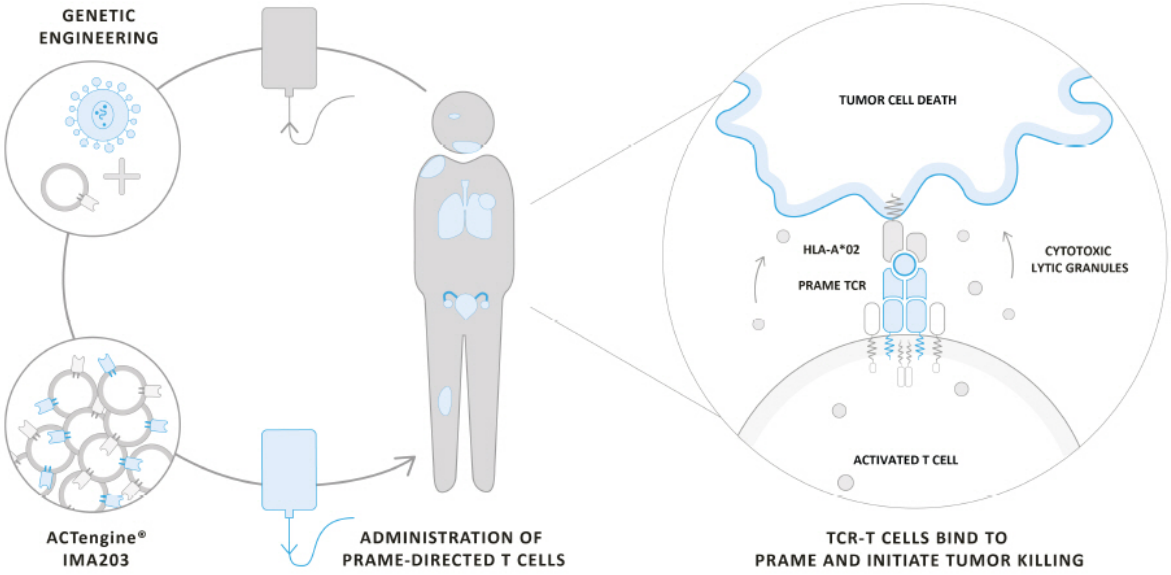


ACTengine® IMA203 – TCR-T Targeting PRAME

ACTengine® IMA203 Targeting PRAME – Mechanism of Action

Immatics' Leading TCR-T Approach



Key Pillars of Developing a Successful TCR-T Product Candidate

Summary of Interim Update on IMA203 TCR-T Phase 1b Cohort A as of April 2023

Safety

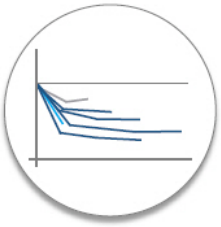
Manageable tolerability at doses as high as ~$9x10^9$ TCR-T cells

Anti-Tumor Activity

High rate of objective responses:

64% (7/11) ORR[1]

67% (6/9) cORR[2]

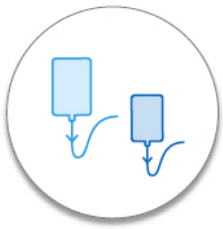


Durability

Ongoing durable responses at 9+ months

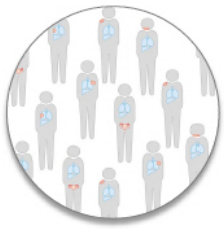
mDOR: Not reached
min 1.3+, max 8.8+

mFU: 8.5 months



Product Quality

Rapid manufacturing time of 7 days (+ 7-day release testing), manufacturing success rate of 94%

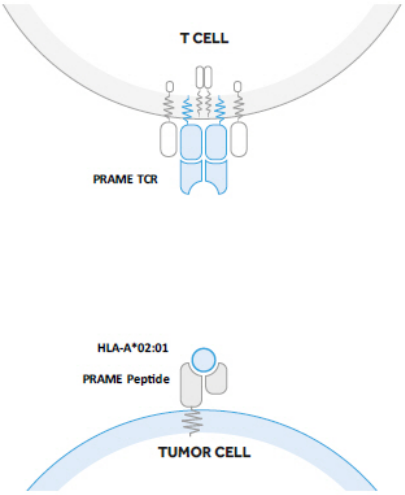


Broad Reach

Confirmed objective responses in broad range of solid cancer types at low, medium and high PRAME levels above threshold

The Multi-Cancer Opportunity of PRAME

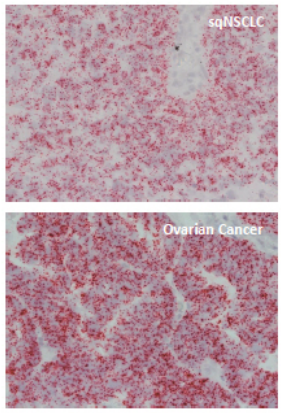
One of the Most Promising Solid Tumor Targets for TCR-based Therapies Known To Date



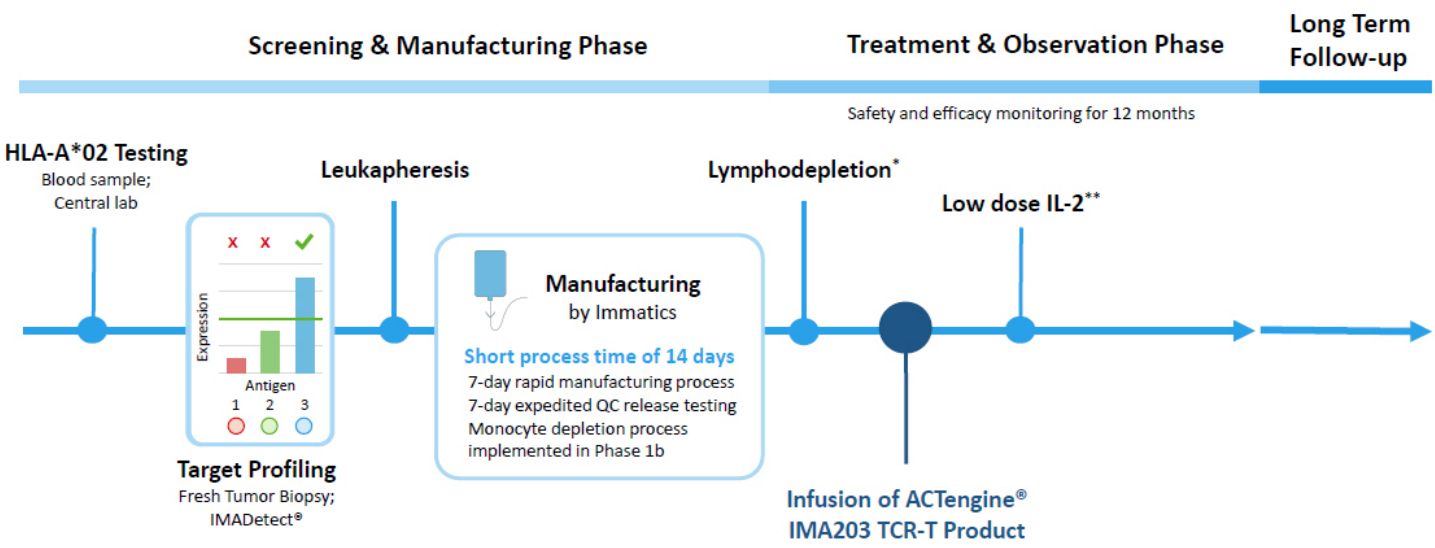
PRAME fulfills all properties of an ideal target for TCR-based therapies

- High prevalence
- High target density
- Homogeneous expression
- "Clean" expression profile
- Clinical proof-of-concept

PRAME RNA detection in tumor samples (ISH)

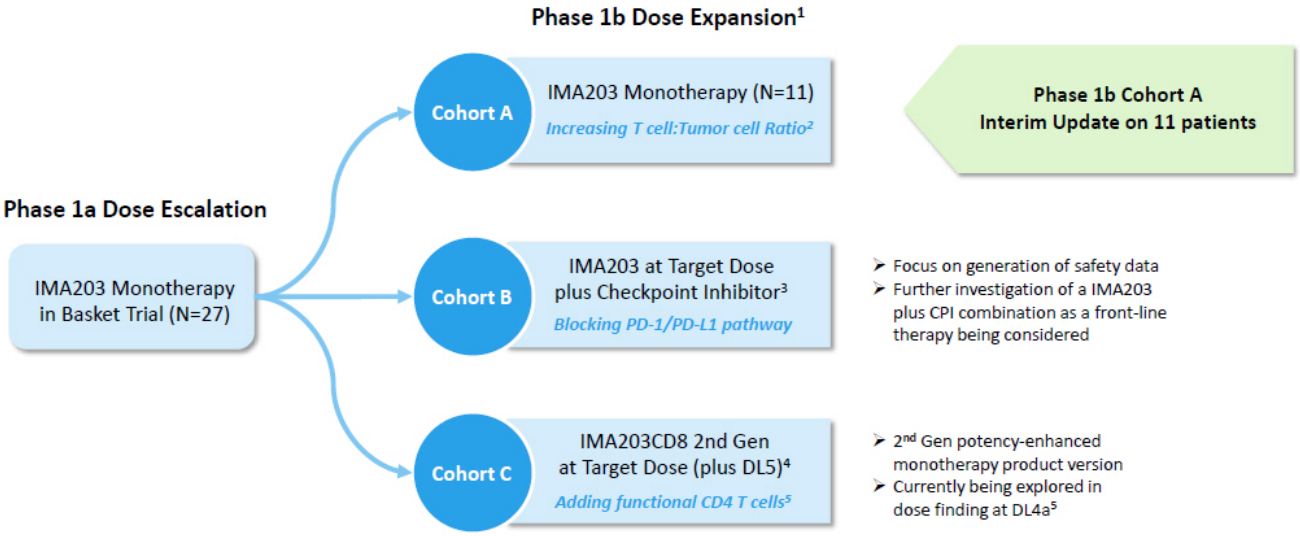


ACTengine® IMA203 TCR-T Monotherapy – Patient Flow



ACTengine® IMA203 TCR-T Phase 1 Design

Focus on IMA203 TCR-T Monotherapy Investigated in Cohort A



Data cut-off Apr 04, 2023

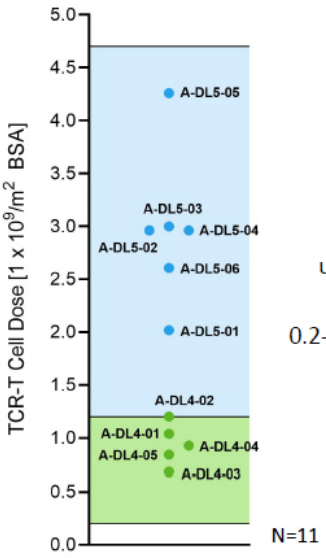
[1] Updated target dose (provisional recommended Phase 2 dose, RP2D) determined at DL4+DL5 for Cohort A and B, for Cohort C treatment of n=3 patients at DL3 completed, enrollment at DL4a ongoing before continuation at DL4b and potentially DL5; [2] Demonstrated to be associated with durable response: Locke *et al.* 2020 Blood Advances; [3] Opdivo® (nivolumab): programmed death-1 (PD-1) immune checkpoint inhibitor; [4] Demonstrated to be important for long-term remission: Melenhorst *et al.* 2022 Nature, Bai *et al.* 2022 Science Advances; [5] IMA203CD8 Dose Level 4a: 0.481-0.8x10^8 transduced viable CD8 T cells/m^2 BSA

ACTengine® IMA203 TCR-T Monotherapy – Phase 1b Cohort A

Patient and Product Characteristics

Patients in Phase 1b Cohort A (N=11)[1]	
Age Mean (min, max)	**55.4** **(31, 79)**
Gender Male / Female [% of patients]	**45.5 / 54.5**
Prior lines of treatment Mean (min, max)	**3.7** **(1, 10)**
LDH at baseline >1 x ULN [% of patients]	**54.5**
Baseline tumor burden Mean target lesion sum of diameter [mm] (min, max)	**73.8** **(21.0, 207.3)**
Total infused dose Mean TCR-T cells[2] infused [x10^9] (min, max)	**3.67** **(1.30, 8.84)**

Heavily pre-treated, metastatic last-line patients that have exhausted all available standard of care treatments



DL5 cleared for safety, updated provisional RP2D comprises DL4 + DL5: 0.2-4.7 x 10^9 TCR-T cells/m^2 BSA

[1] Including ovarian cancer patient A-DL5-04 who erroneously received one dose of nivolumab and is part of intent-to-treat (shown here) but not per-protocol population;
[2] Transduced viable CD8 T cells; ULN: Upper limit of normal; LDH: Lactate dehydrogenase; BSA: Body surface area; RP2D: Recommended Phase 2 Dose

Most Frequent Adverse Events – Phase 1b Cohort A (N=11)

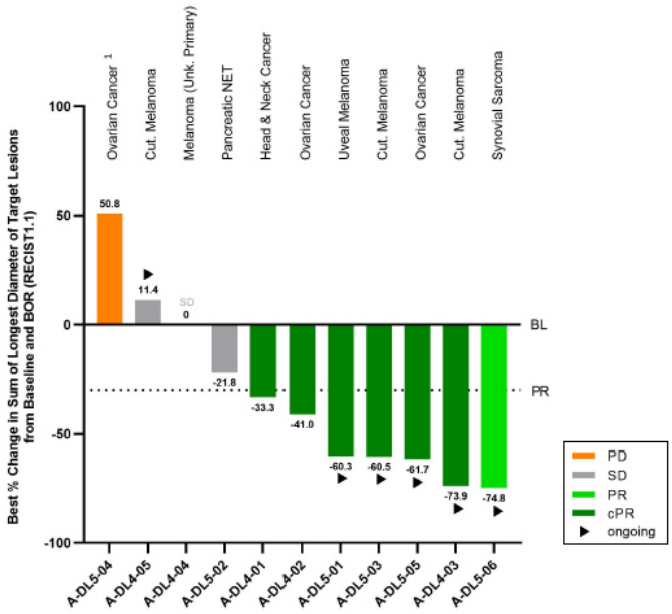
Manageable Treatment-emergent Adverse Events (TEAEs)

- **Expected cytopenia (Grade 1-4)** associated with lymphodepletion in all patients
- **Low-moderate cytokine release syndrome (CRS)** in 91% (10/11) of patients
  - 45% (5/11) of patients had Grade 1 CRS (3 in DL4, 2 in DL5)
  - 45% (5/11) of patients had Grade 2 CRS (2 in DL4, 3 in DL5)
  - No dose-dependent increase of CRS
- **No ICANS[1]**
- **No Dose-limiting toxicity**
- For IMA203 TCR-T monotherapy tolerability profile including Phase 1a dose escalation, see appendix

IMA203 TCR-T monotherapy shows managable tolerability at total doses as high as ~$9x10^9$ TCR-T cells

Best Overall Response – Phase 1b Cohort A

Deep Objective Responses Independent of Tumor Type



ORR (at ~week 6)[2]	64% (7/11)
cORR (at ~month 3)[3]	67% (6/9)

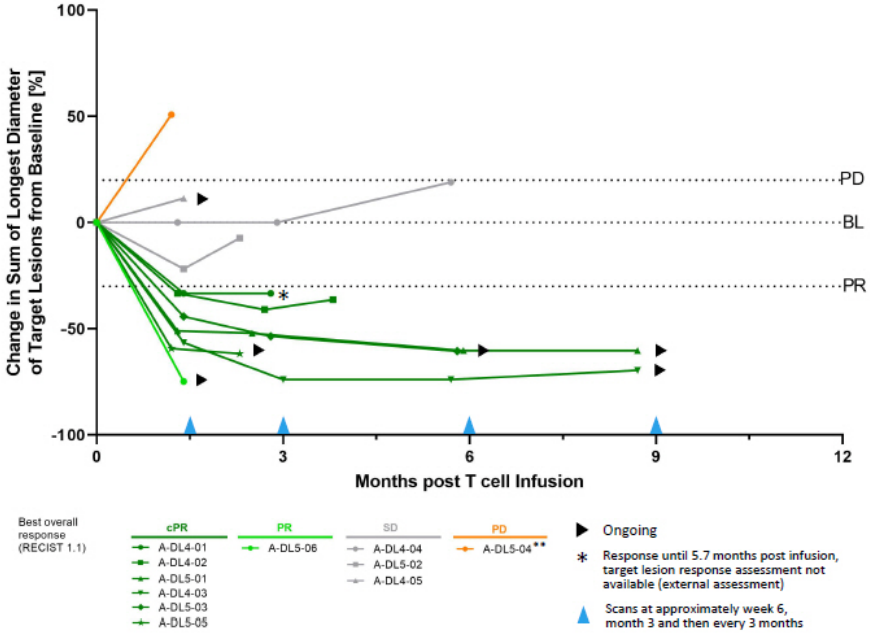
Deep objective responses observed across multiple, heavily pre-treated tumor types

- Responses observed in cutaneous and uveal melanoma, synovial sarcoma, head and neck cancer, and ovarian cancer
- Initial responses at week 6 were confirmed in all 6 responders with available subsequent 3-month scan
- All cut. melanoma patients were CPI-refractory
- All ovarian cancer patients were platinum-resistant

[1] Ovarian cancer patient A-DL5-04 erroneously received one dose of nivolumab and is part of intent-to-treat population (shown here) but not per-protocol population; [2] Initial ORR: Objective response rate according to RECIST 1.1 at first scan post infusion at ~week 6; [3] Confirmed ORR (cORR): Confirmed objective response rate according to RECIST 1.1 for patients with available second scan post infusion at ~month 3 or patients with progressive disease (PD) at any timepoint before this scan; PD: Progressive Disease; SD: Stable Disease; PR: Partial Response; cPR: Confirmed Partial Response; BL: Baseline; BOR: Best Overall Response; NET: Neuroendocrine Tumor; CPI: Checkpoint Inhibitor

Response over Time – Phase 1b Cohort A

Durable Partial Responses 9+ Months after IMA203 TCR-T Treatment



Best overall response (RECIST 1.1)

cPR	PR	SD	PD
A-DL4-01	A-DL5-06	A-DL4-04	A-DL5-04**
A-DL4-02		A-DL5-02	
A-DL5-01		A-DL4-05	
A-DL4-03			
A-DL5-03			
A-DL5-05			

▶ Ongoing

* Response until 5.7 months post infusion, target lesion response assessment not available (external assessment)

▲ Scans at approximately week 6, month 3 and then every 3 months

Median DOR[1], min, max DOR	Not reached, 1.3+, 8.8+ months
Median Follow-up[2]	8.5 months

Median time from IMA203 TCR-T infusion to onset of response was 1.4 months

Ongoing responses in 5 of 7 responders:

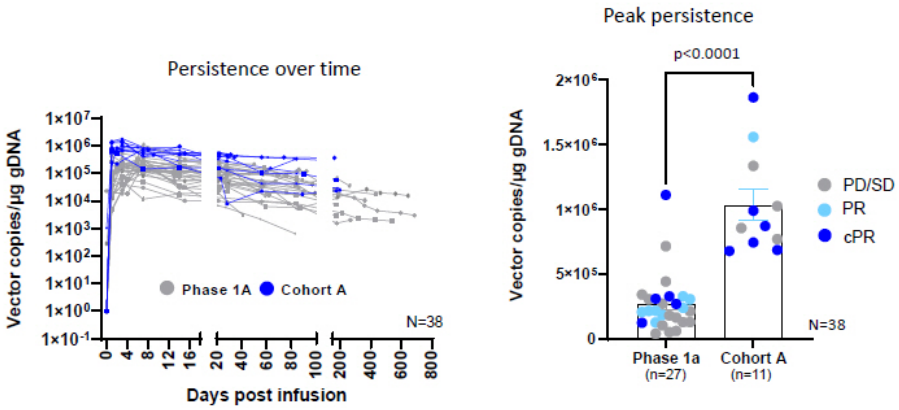
- 2 cPRs (cut. & uveal melanoma) ongoing at 9+ months
- 1 cPR (cut. melanoma) ongoing at 6+ months
- 1 cPR (ovarian cancer) ongoing at ~3 months
- 1 PR (synovial sarcoma) ongoing at 6+ weeks

**Ovarian cancer patient A-DL5-04 erroneously received one dose of nivolumab and is part of intent-to-treat population (shown here) but not per-protocol population; [1] Duration of response (DOR) in confirmed responders is defined as time from first documented response until disease progression/death. Patients with ongoing response will be censored at date of data cut-off. Median DOR is analyzed by using the Kaplan-Meier method; [2] Median Follow-up is analyzed by using the reverse Kaplan-Meier method; PD: Progressive Disease; SD: Stable Disease; PR: Partial Response; cPR: Confirmed Partial Response; BL: Baseline

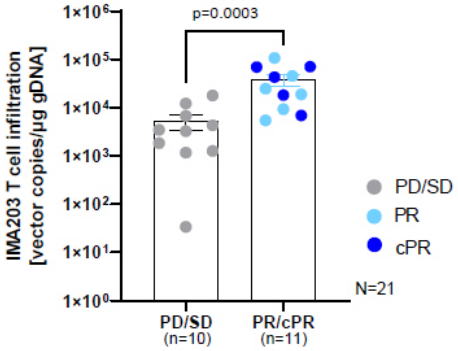
Biological Data Consistent with Clinical Data

IMA203 TCR-T Levels and Tumor Infiltration across Patients in Phase 1a and Phase 1b Cohort A

Increased levels of IMA203 T cells in the blood of patients in Cohort A following increase of cell dose and switch to monocyte depletion process



IMA203 T cells found in all evaluable tumor tissues, level of infiltration associated with objective responses[1]

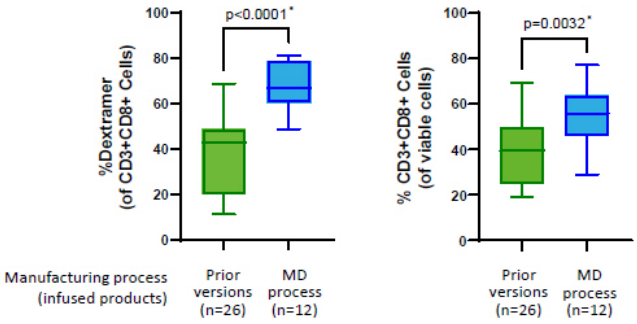


Mann-Whitney U test; [1] T cell infiltration for 21 patients (10 non-responder, 11 responder) with 6-week post infusion biopsy available (1 patient with ~4-week, 2 patients with ~13-week post infusion biopsy); PD: Progressive Disease; SD: Stable Disease; PR: Partial Response; cPR: Confirmed Partial Response

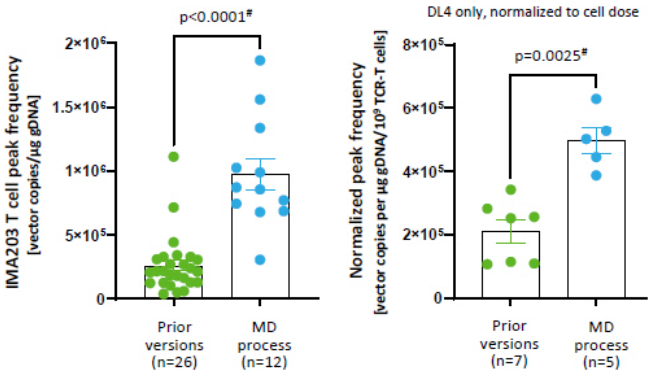
Favorable TCR-T Product Characteristics and High TCR-T Levels in Patients

Manufacturing Improvements Implemented in Phase 1b Enhance Key Features of the Cell Product

Improved TCR-T product features



Increased peak TCR-T levels in patients



Manufacturing success rate of 94% to reach provisional RP2D**

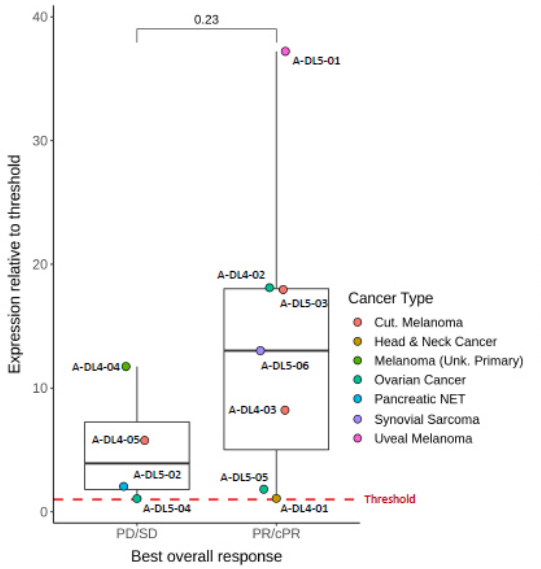
Mean cell dose infused in 11 patients in Phase 1b Cohort A was 3.67×10^9 TCR-T cells

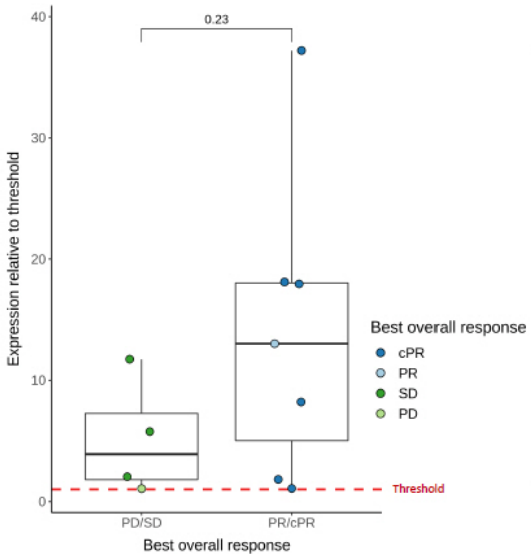
MD process: Monocyte depletion process; * Unpaired t test; # Mann-Whitney U test;
** Updated provisional RP2D comprises DL4 + DL5: $0.2\text{-}4.7 \times 10^9$ transduced viable CD8 T cells/m^2 BSA;

Responses above Immatics' PRAME RNA Threshold Independent of Tumor Type

Highlighting Tumor Types (left) and Type of Best Overall Response (right) – Phase 1b Cohort A

PRAME RNA expression in pre-treatment biopsies relative to threshold



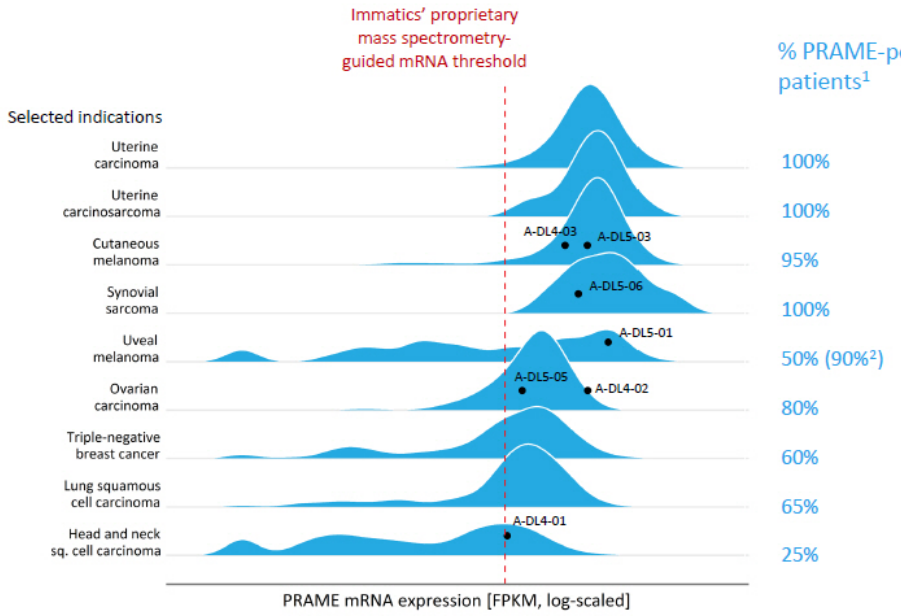


IMA203 achieved objective responses at <u>all</u> expression levels above Immatics' mass spectrometry-guided RNA threshold

IMA203 has the potential to provide clinical benefit for all PRAME biomarker-positive cancer patients

Potential of IMA203 in Additional Solid Cancer Indications

Based on PRAME Expression in IMA203 TCR-T Responders – Phase 1b Cohort A



Data cut-off Apr 04, 2023

PRAME target expression distribution (blue histogram) based on TCGA RNAseq data, patient data (black dots) based on IMADetect® qPCR testing of screening biopsies; [1] PRAME target prevalence is based on TCGA RNAseq data combined with a proprietary MS-guided RNA expression threshold; [2] PRAME target prevalence in uveal melanoma based on IMADetect® qPCR testing of screening biopsies from clinical trial patients (n=21) demonstrates substantial higher prevalence of 90% compared to prevalence based on TCGA data of 50%, TCGA: early & late-stage primary tumor samples, Immatics clinical trials: late-stage/metastatic tumor samples, Role of PRAME in metastasis of uveal melanoma: Field *et al.* 2016 Clinical Cancer Research; MS: mass spectrometry

ACTengine® IMA203 TCR-T Monotherapy Targeting PRAME

Summary of Phase 1b Cohort A Interim Data Update

- **Manageable tolerability** with no high-grade CRS, no ICANS in 11 patients in Cohort A[1]
- **Objective responses observed in heavily pre-treated last-line solid cancer patients** including checkpoint-refractory cutaneous melanoma, platinum-resistant ovarian cancer, uveal melanoma, head and neck cancer, synovial sarcoma
- **High objective response rate (ORR):**
  - 64% (7/11) ORR (at ~week 6)
  - 67% (6/9) cORR (at ~month 3)
- **Ongoing durable responses:**
  - Median duration of response not reached at a median follow-up time of 8.5 months
  - Ongoing PRs 9+ months after IMA203 TCR-T treatment
- **Objective responses independent of tumor type at low, medium and high PRAME levels above threshold**
- **Manufacturing success rate of 94%** to reach current RP2D, **rapid 7-day manufacturing process (+7-day release testing)**

Increased confidence in the success and broad potential of targeting PRAME and our product candidate IMA203 TCR-T

[1] For IMA203 TCR-T monotherapy tolerability profile including Phase 1a dose escalation, see appendix;
CRS: Cytokine Release Syndrome; ICANS: Immune effector cell-associated neurotoxicity syndrome; RP2D: provisional recommended Phase 2 dose

Immatics' ACTengine® IMA203 TCR-T Development Strategy

Two Pillared Strategy

FAST & FOCUSED

Objective: Deliver best-in-class therapy in 1-2 last-line solid cancer types as fast as possible

- Focus on indications with PRAME prevalence above 80% with available clinical PoC, such as cut. melanoma (potentially bundled with uveal melanoma) and ovarian cancer
- Highly modular and scalable manufacturing facility expected to be operational in 2024 to support efforts to maximize speed to market
- Planned start of a first Phase 2 trial in 1H 2024 – targeted to be already registration-directed

GO BROAD

Objective: Expand development to other cancer types

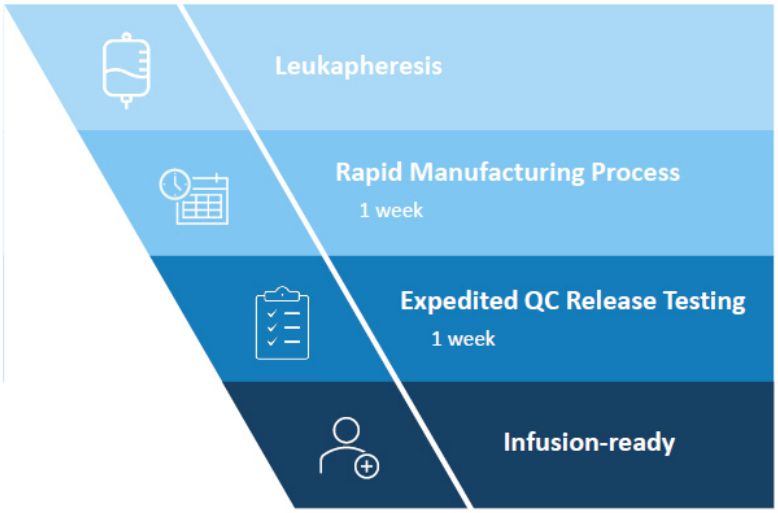
- Signal finding in other cancer types with a broad patient reach, such as uterine cancer, lung cancer, breast cancer, head and neck cancer

Update on all three IMA203 Phase 1b cohorts and clinical development path towards registration-directed trials and potential commercialization for PRAME TCR-T monotherapy is planned for 4Q 2023

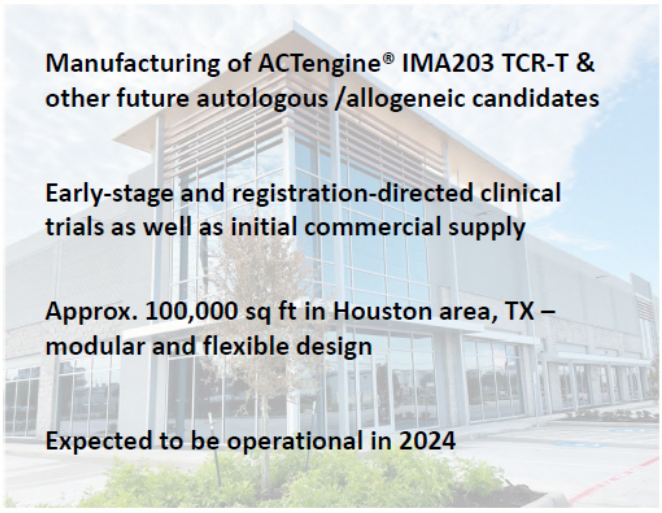
ACTengine® IMA203 TCR-T Product Manufacturing

Enhancing Manufacturing Process and Capabilities

Short manufacturing turnaround time



State-of-the-art research & GMP manufacturing facility



IMA203 TCR-T Has the Potential to Reach a Large Patient Population

~39,000 Patients per Year in the US only

Selected Indications	Incidence	R/R Incidence	PRAME Positive	Patient Population (Based on R/R Incidence; PRAME and HLA-A*02:01+)
Cut. Melanoma	99,800	7,700	95%	2,999
Uveal Melanoma	1,500	800	90%	295
Ovarian Carcinoma	19,900	12,800	80%	4,198
Uterine Carcinoma	62,700	10,700	100%	4,387
Uterine Carcinosarcoma	3,300	1,900	100%	779
Squamous NSCLC	57,000	34,600	65%	9,221
Small Cell Lung Cancer	31,900	19,400	55%	4,375
Adeno NSCLC	91,200	55,300	25%	5,668
HNSCC	66,500	15,100	25%	1,548
Breast Carcinoma	290,600	43,800	25% TNBC: 60%	4,490
Synovial Sarcoma	1,000	400	100%	164
Cholangiocarcinoma	8,000	7,000	35%	1,005

TOTAL ~39,000 annually in the US

Multiple opportunities to broaden patient reach and patient benefit:

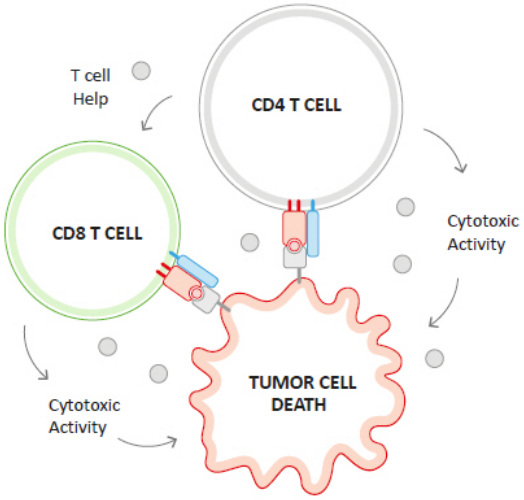
- Expand beyond US population
- Expand into other indications such as kidney, esophageal, bladder, liver cancer, other sarcoma subtypes through indication-specific or indication-agonistic label expansion
- Move into earlier lines of therapy (R/R Incidence → Incidence)
- Inclusion of patients with lower PRAME-threshold

IMA203

Incidences based on public estimates and Immatics internal model; Relapsed/refractory (R/R) or last-line patient population approximated by annual mortality; Estimated 41% HLA-A*02:01 positive population in the US; PRAME target prevalence is based on TCGA (for SCLC: in-house) RNAseq data combined with a proprietary mass spec-guided RNA expression threshold; Uveal melanoma target prevalence is based on IMADetect® qPCR testing of screening biopsies from clinical trial patients (n=21)

ACTengine® IMA203CD8 – Next-generation TCR-T

Building on First-Gen IMA203 Success to Further Improve Anti-Tumor Activity

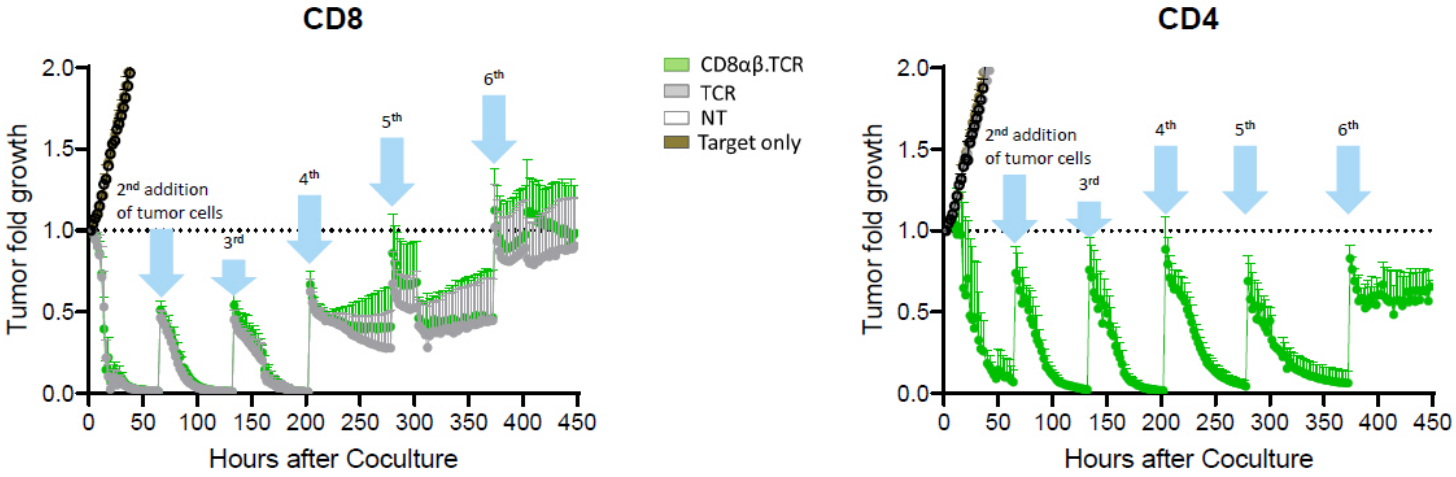


- Engagement of CD4 T cells by CD8 co-transduction reported to boost anti-tumor activity in TCR-T trials
- Recent data from leukaemia patients treated with CAR-T suggest a relevant role of engineered CD4 T cells in maintaining durable tumor responses over a long period of time[1]
- Functional superiority of the **CD8αβ** construct over multiple other CD8 constructs in preclinical experiments
- Proprietary 4-in-1 lentiviral vector to engineer CD4 and CD8 T cells with the PRAME-specific IMA203 TCR and CD8αβ construct (IMA203CD8)

[1] Melenhorst *et al.* 2022 Nature, Bai *et al.* 2022 Science Advances

ACTengine® IMA203CD8 – Preclinical Assessment of Anti-Tumor Efficacy

Functional CD4 T cells Mediate Longer Anti-Tumor Activity than CD8 T cells *in vitro*



Engagement of CD4 T cells may enhance depth and durability of anti-tumor response and clinical outcome of TCR-T in solid cancer patients

ACTengine® IMA204 – TCR-T Targeting COL6A3 Exon 6

ACTengine® IMA204 First-in-Class TCR-T Targeting Tumor Stroma

Key Features

TARGET

HLA-A*02-presented peptide derived from **COL6A3 exon 6**

Naturally and specifically presented on tumors at high target density[1]: **100-700 copies/cell**

Novel **tumor stroma target** identified and validated by XPRESIDENT® quant. mass spectrometry platform

TCR

High-affinity, specific TCR targeting COL6A3 exon 6

Affinity-maturated, CD8-independent TCR

High functional avidity[2]: **~0.01ng/ml**

Identified and characterized by XCEPTOR® TCR discovery and engineering platform

PRECLINICAL DATA

CD8-independent, next-generation TCR engages both, CD8 and CD4 T cells

In vitro anti-tumor activity against target-positive cell lines in CD8 and CD4 T cells

Complete tumor eradication in *in vivo* mouse models

PATIENT POPULATION[3]

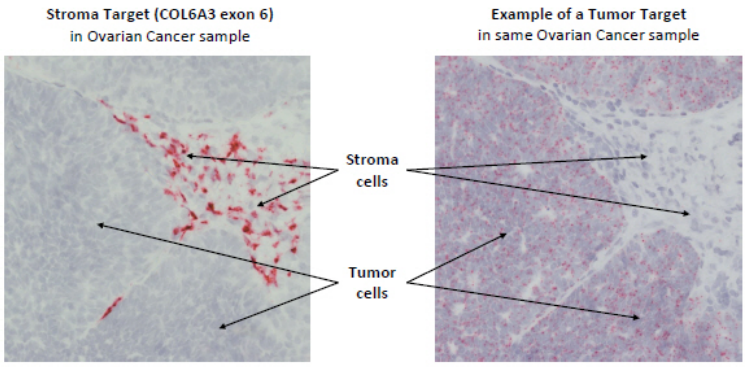
Pancreatic Carcinoma – 80%
Breast Carcinoma – 75%
Stomach Carcinoma – 65%
Sarcoma – 65%
Esophageal Carcinoma – 60%
Squamous NSCLC– 55%
Adeno NSCLC– 55%
HNSCC – 55%
Uterine Carcinosarcoma – 55%
Colorectal Carcinoma – 45%
Mesothelioma – 45%
Cholangiocarcinoma – 40%
Ovarian Carcinoma – 40%
Melanoma – 35%
Bladder Carcinoma – 35%

IMA204 provides a promising therapeutic opportunity for a broad patient population as monotherapy or in combination with TCR-T cells directed against tumor targets

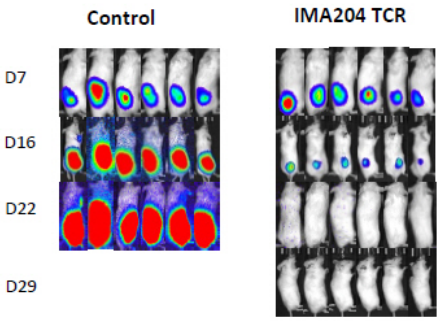
[1] Target density: peptide copy number per tumor cell, approximate range representing the majority of tumor samples analyzed; [2] Functional avidity: EC50 half maximal effective concentration;
[3] Solid cancer indications with 20% or more target expression, Target prevalence for selected cancer indications based on mRNA expression (TCGA and Immatics inhouse data)

ACTengine® IMA204 – High Affinity, CD8-independent TCR

Complete Tumor Eradication *in vitro & in vivo*[1] by Affinity-enhanced IMA204 TCR



COL6A3 exon 6 prevalently expressed at high target density in tumor stroma across many solid cancers



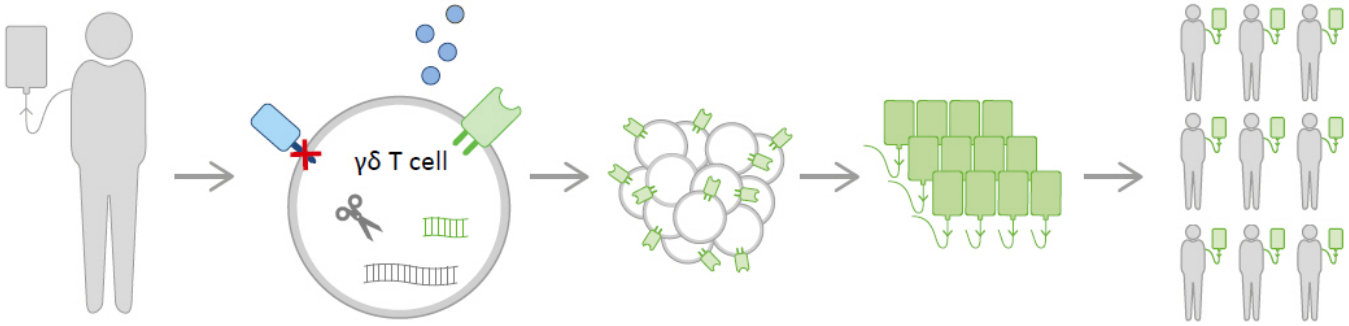
CD8-independent TCR leads to tumor eradication in all mice treated

Affinity maturated CD8-independent, next-generation TCR engages both CD4 and CD8 T cells without the need of CD8 co-transduction

[1] *In vivo* data in collaboration with Jim Riley, University of Pennsylvania, control: non-transduced T cells. TCR avidity and specificity data not shown, available in IMA204 presentation on Immatics website.

ACTallo® – Our Next-generation Off-the-shelf TCR-T

ACTallo® – Immatics' Allogeneic Cell Therapy Approach



γδ T cell Collection from Healthy Donor

Cell Engineering (gene editing & armoring)

Expansion

Off-the-shelf Products

Patient Treatment

- **Off-the-shelf cell therapy**, no need for personalized manufacturing → reduced logistics and time to application
- **Potential for hundreds of doses** from one single donor leukapheresis → lower cost of goods
- **Use of healthy donor material** provides standardized quality and quantity of starting material

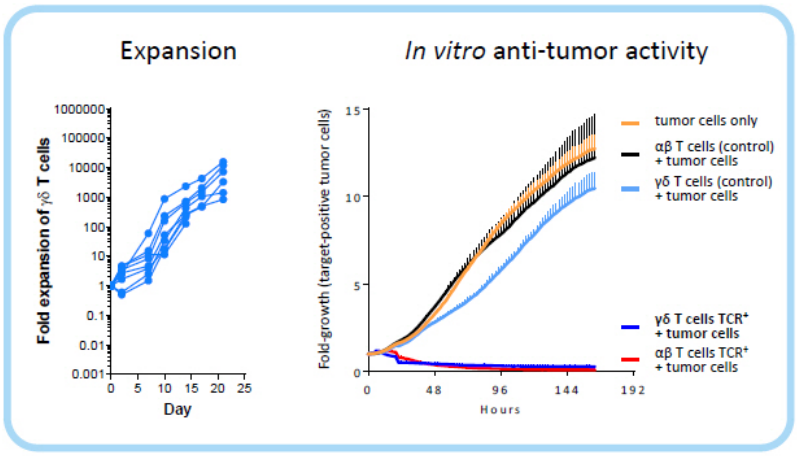
- Strategic collaborations combining Immatics' proprietary ACTallo® platform with Bristol Myers Squibb's next-gen technologies and Editas Medicine's CRISPR gene editing technology to develop next-gen allogeneic γδ TCR-T/CAR-T programs

Why γδ T cells?

γδ T cells Are Well Suited for an Off-the-shelf Cell Therapy Approach

γδ T cells

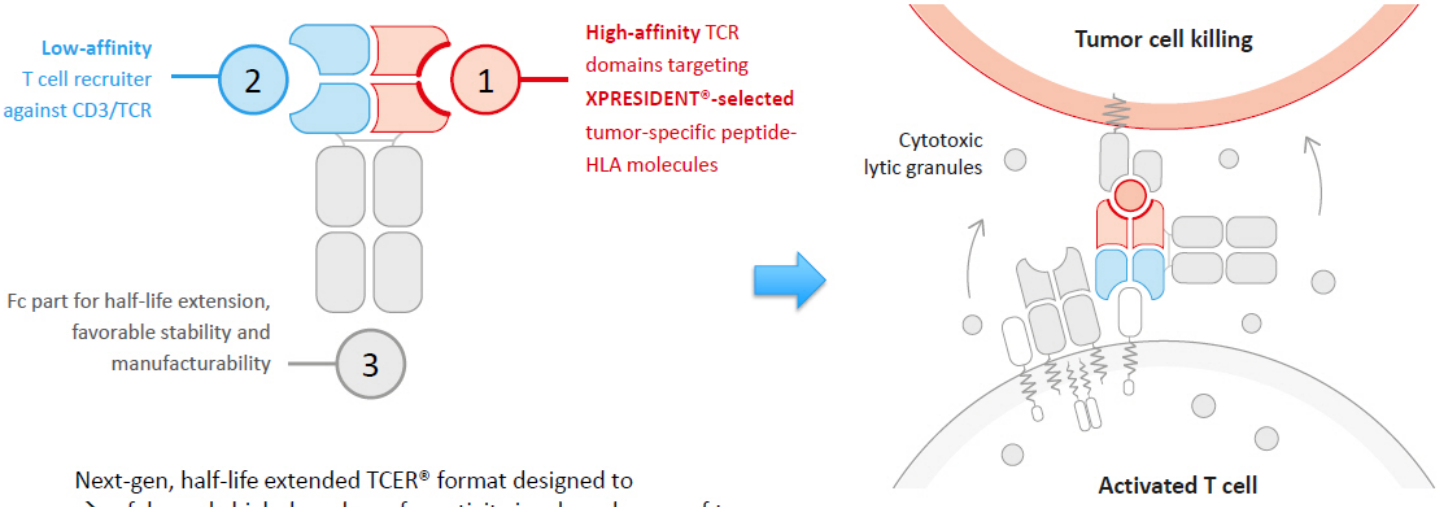
- ✓ are abundant in the peripheral blood
- ✓ show intrinsic anti-tumor activity
- ✓ naturally infiltrate solid tumors & correlate with favorable prognosis
- ✓ are HLA-independent, thus do not cause graft-vs-host disease in allogeneic setting
- ✓ can be expanded to high numbers in a cGMP-compatible manner
- ✓ can be effectively redirected using αβ TCR or CAR constructs



TCER® – TCR Bispecifics

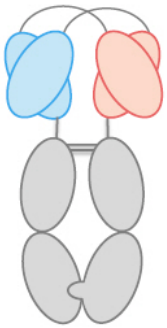
TCER® – Immatics' Next-generation, Half-Life Extended Bispecifics

Proprietary TCER® Format Consisting of Three Distinct Elements



Next-gen, half-life extended TCER® format designed to
→ safely apply high drug doses for activity in a broad range of tumors
→ achieve optimized scheduling

TCER® – Immatics' Next-generation, Half-Life Extended Bispecifics



1 **pHLA targeting TCR**

- ✓ **High-affinity** (single digit nM) TCR targeting **XPRESIDENT®-selected** tumor-specific peptide-HLA molecules
- ✓ Broad therapeutic window through **XPRESIDENT®-guided** affinity maturation (>1000x)[1]
- ✓ **Complete tumor eradication** in mouse xenograft models at low doses

2 **T cell recruiting antibody**

- ✓ **Low-affinity** (triple digit nM) T cell recruiter against both **TCR & CD3**
- ✓ **Optimized biodistribution** aiming for enrichment at tumor site and **prevention of CRS**[2]
- ✓ **Superior anti-tumor activity** in mouse models as compared to widely used CD3 recruiters

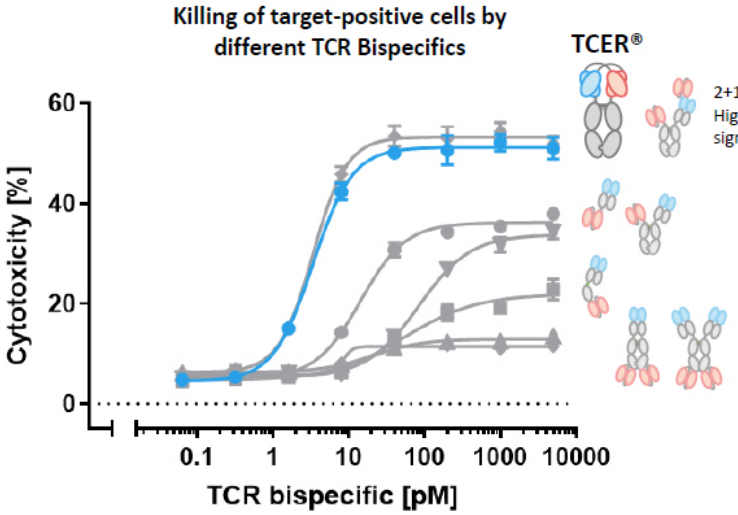
3 **Next-generation TCER® format**

- ✓ Off-the-shelf biologic with antibody-like manufacturability[3] and low cost of goods
- ✓ Superior anti-tumor activity[4] compared to six alternative bispecific formats
- ✓ Half-life of several days expected in humans

Our TCER® format is designed to maximize efficacy while minimizing toxicities in patients

[1] As compared to natural TCR; [2] Based on literature data for other low-affinity recruiters (e.g. Harber *et al.*, 2021, Nature; Trinklein *et al.*, 2019, mAbs);
[3] Production in mammalian cells (CHO cells); [4] Based on preclinical testing

Potency of Our Proprietary TCR Bispecific Format TCER®



TCER®

2+1 TCR bispecific format:
High potency was linked to a significantly reduced specificity profile

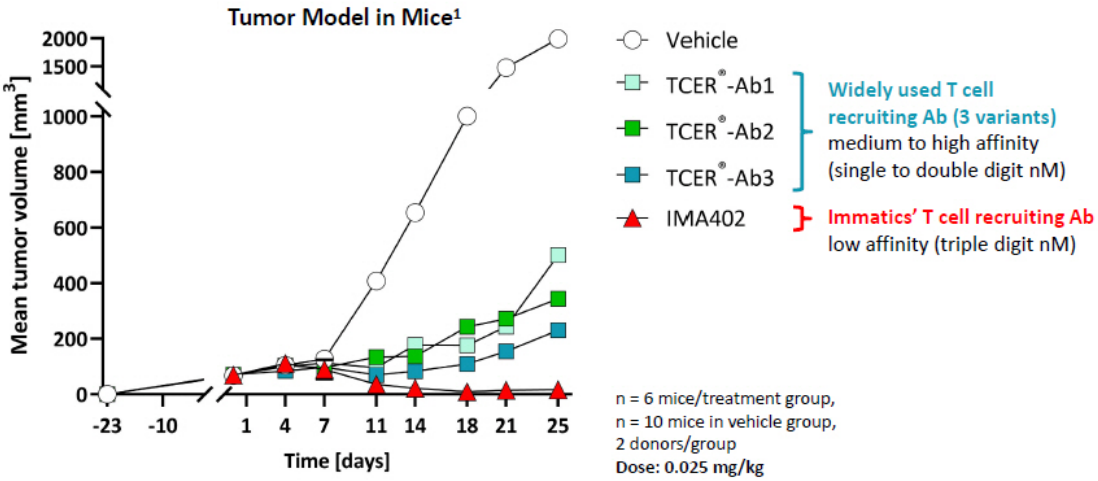
- Seven different TCR Bispecific formats were evaluated with a pHLA targeting TCR and the identical T cell recruiting antibody
- TCER® format had higher combination of potency and specificity[1] than six alternative TCR Bispecific format designs evaluated

Flexible Plug-and-play platform: TCER® format successfully validated for different TCRs & different T cell recruiting antibodies

[1] Preclinical data on specificty not shown

TCER® Format Is Designed for Optimized Efficacy and Safety

Superior Tumor Control Using a Novel, Low-Affinity Recruiter

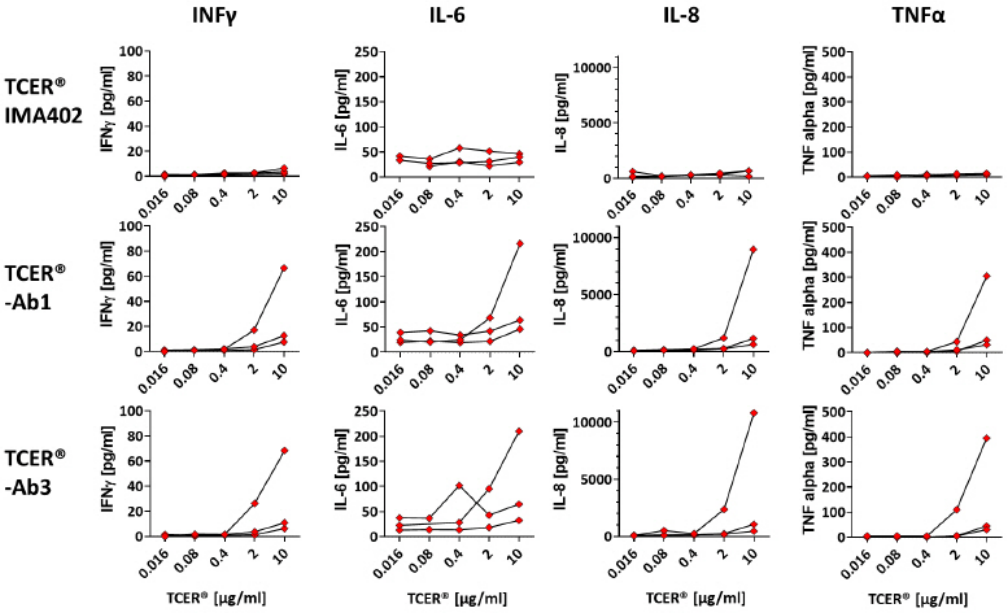


Proprietary, **low-affinity T cell recruiting region** demonstrates superior tumor control compared to analogous TCER® molecules designed with higher-affinity variants of a widely used recruiter

¹ Hs695T xenograft model in NOG mice, tumor volume of group means shown

TCER® Format Is Designed for Optimized Efficacy and Safety

Reduced Target-Unrelated Recruiter-Mediated Cytokine Release using a Low-Affinity Recruiter



Whole blood cytokine release assay
N=3 HLA-A*02-positive donors
N=16 cytokines tested,
4 exemplary cytokines shown

Our TCER® Portfolio

Broad Pipeline of Next-Gen Half-Life Extended TCR Bispecifics

IMA401 (Bristol Myers Squibb)
- MAGEA4/8 peptide presented by HLA-A*02:01
- Start of clinical trial in May 2022, **dose escalation ongoing**

IMA402
- PRAME peptide presented by HLA-A*02:01
- Start of clinical trial planned for 2H 2023, first clinical data in 2024

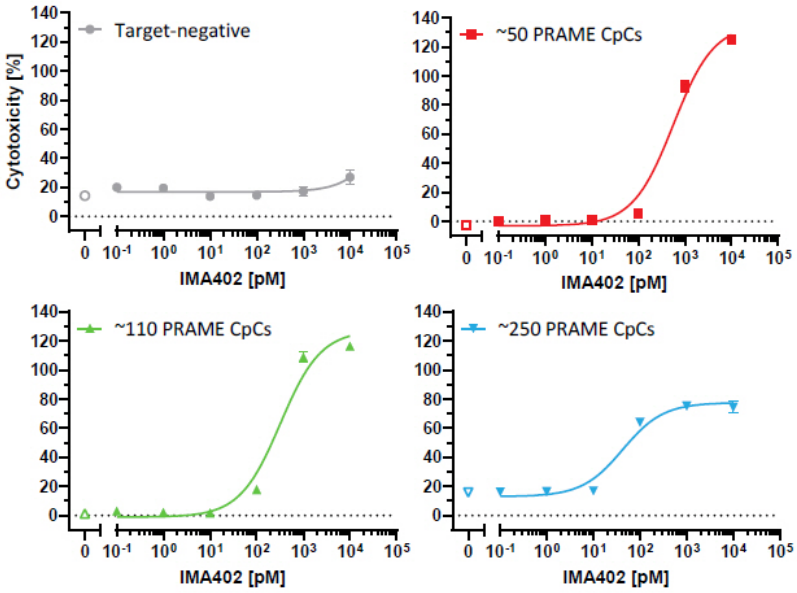
IMA403
- Undisclosed peptide presented by HLA-A*02:01
- Preclinical PoC studies ongoing

IMA40x
Several innovative programs
- Undisclosed peptides presented by HLA-A*02:01 and other HLA-types
- TCER® engineering and preclinical testing ongoing

Potential for addressing different indications and large patient populations with novel, off-the-shelf TCR Bispecifics

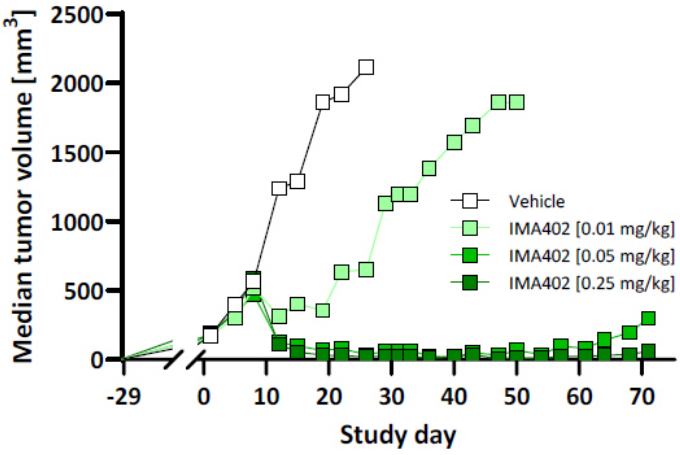
TCER® IMA402 Targeting PRAME – Efficacy Assessment *in vitro*

Tumor Cell Killing at Low Physiological PRAME Peptide Levels



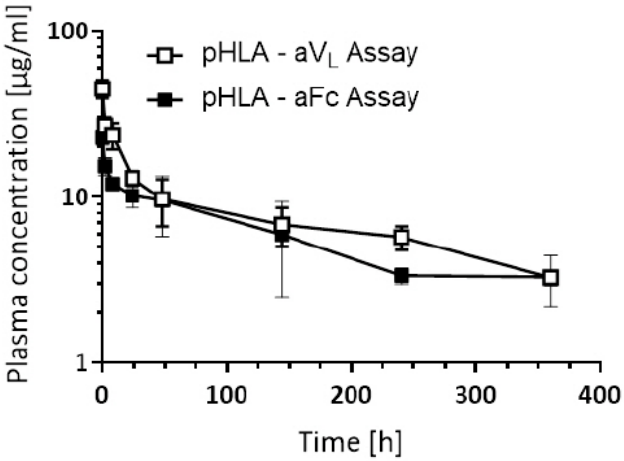
- TCER® IMA402 induces killing of tumor cells with PRAME target copies as low as 50 CpCs
- Physiological PRAME levels detected in majority of cancer tissues from patients are 100 – 1000 CpCs
- Preclinical activity profile enables targeting of a broad variety of tumor indications, such as lung cancer, breast cancer, ovarian cancer, uterine cancer, melanoma and others

TCER® IMA402 Achieves Durable Tumor Control of Large Tumors *in vivo*

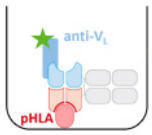


- Dose-dependent efficacy of IMA402 in cell line-derived *in vivo* mouse model
- Durable shrinkage of large tumors including complete responses over prolonged period
- Sufficiently high drug doses are key to achieving desired anti-tumor effect

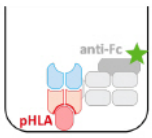
Half-life Extended Format of IMA402 Confers Terminal Half-life of >1 Week



pHLA – aV$_L$ Assay



pHLA – aFc Assay



- IMA402 shows a terminal serum half-life of ≈ 8 days in mice
- IMA402 will be initially dosed weekly in the clinical trial
- Dosing frequency may be adapted based on clinical data

Advancing TCER® IMA402 Towards Clinical Development

Recent and Upcoming Activities

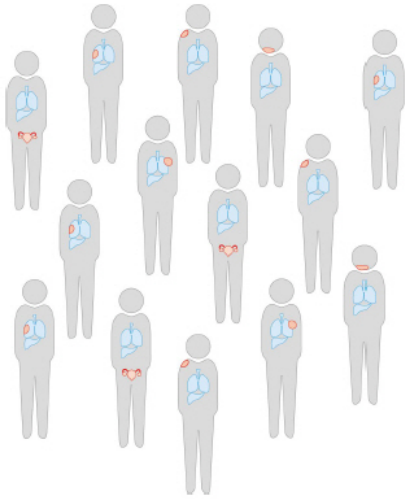
Recent activities

- ✓ Completion of IND-enabling data package
- ✓ Manufacturing of GMP batch completed with high titer (>3.5 g/L) and high yield
- ✓ Scientific advice with regulatory authorities
- ✓ **CTA[1] submitted in April 2023**

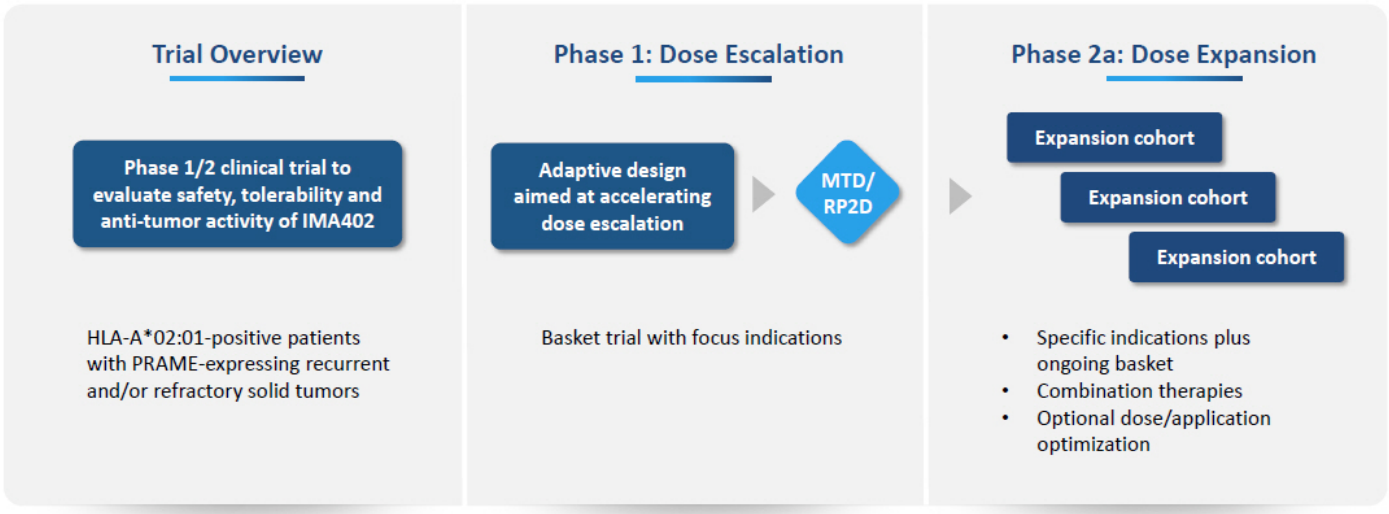
Upcoming activities

- Start of patient treatment planned for 2H 2023
- First clinical data planned in 2024

IMA402 TCER® Ph1/2 clinical trial in patients with solid tumors



TCER® IMA402 Phase 1/2 Clinical Trial to Start in 2023



Accelerated Development of TCER® IMA402

TCER® IMA402 Phase 1/2 Clinical Trial Design

1 Optimized patient selection to leverage the broad PRAME potential

Assuring sufficient PRAME target expression using our IMADetect® qRT-PCR assay (mass spectrometry-guided RNA threshold)

- No pretesting for indications with very high PRAME prevalence, e.g. melanoma, uterine & ovarian cancer, synovial sarcoma
- Prospective target testing for indications with PRAME prevalence <80%, e.g. lung cancer, breast cancer, head and neck cancer

2 Flexible trial design for fast clinical execution

- Adaptive design with flexible dose cohorts, initially only 1-3 patients per dose level, optimized MABEL approach with elevated starting dose, short DLT period of 2 weeks
- Basket trial in focus indications for accelerated signal finding, multiple options for expansion cohorts
- Extension from phase 1/2 to pivotal possible

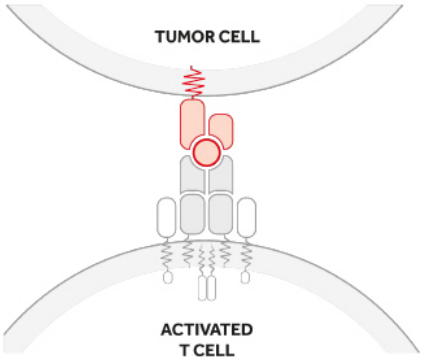
3 Targeting enhanced treatment convenience

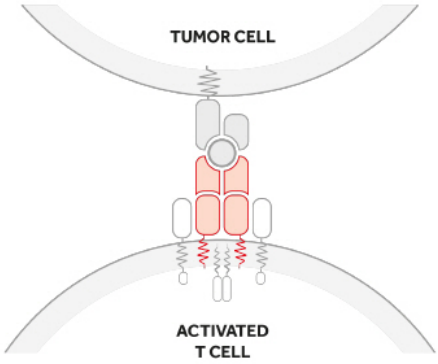
- Initially weekly i.v. infusions, potential for early optimization of scheduling based on half-life extended TCER® format
- Exploring s.c. application

Immatics' Proprietary Target and TCR Discovery Platforms

True Cancer Targets & Matching Right TCRs

Goal to Maximize Anti-Tumor Activity and Minimize Safety Risks of TCR-based Immunotherapies





True Targets via XPRESIDENT® technology platform

- are naturally presented on tumor tissues as identified by mass-spec
- are absent or presented at only low levels on normal tissues
- are presented at high copy numbers to trigger a pharmacological response

Right TCRs via XCEPTOR® technology platform

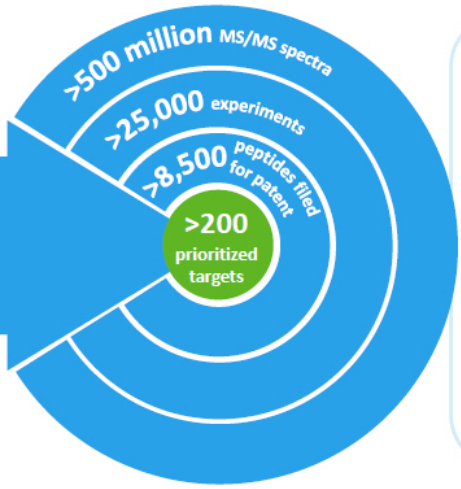
- recognize the target peptide with high affinity and specificity
- show selective killing of tumor cells
- are developed to be suitable for two different therapeutic modalities, Cell Therapies and TCR Bispecifics

Pool of 200 Prioritized Targets as Foundation for Future Value Generation

pHLA Database

based on primary tissues

>2,500 cancer & normal tissues analyzed by Quantitative, Ultra-Sensitive Mass Spectrometry



200 Prioritized Targets

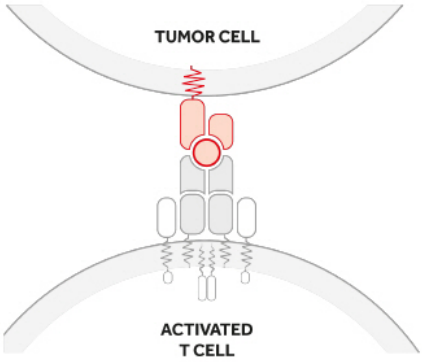
Grouped in 3 Target Classes:

1. **Well known and characterized parent protein (20%)**
   e.g. MAGE family cancer testis antigens
2. **Unknown or poorly characterized parent protein (60%)**
   e.g. stroma target COL6A3 exon 6
3. **Crypto-targets/Neoantigens (20%)**
   Novel target class which includes RNA-edited peptides & non-classical neoantigens

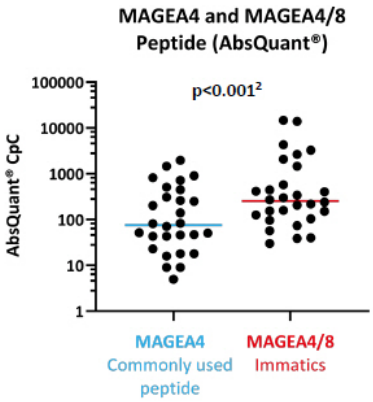
~50% of our prioritized targets are non-HLA-A*02 restricted, substantially broadening the potential patient reach

Immatics' Unique Capability – Identification of the most Relevant Target

Example of MAGEA4/8 Peptide Target



Ranking of pHLA targets



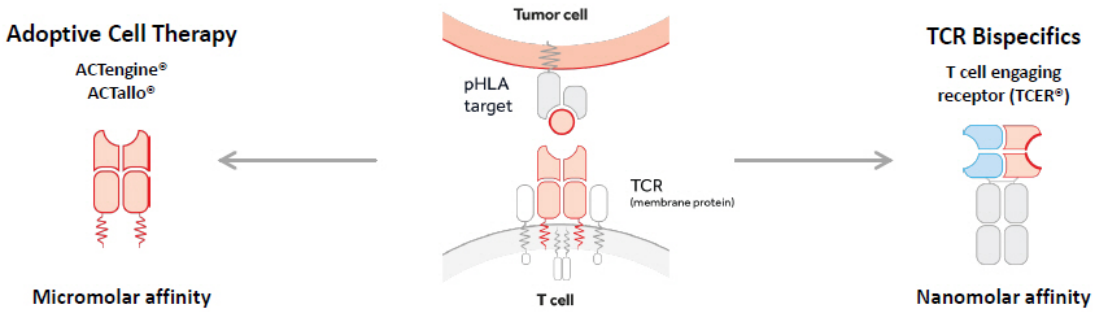
XPRESIDENT® quantitative information on target density¹ between peptides originating from the same source protein

MAGEA4/8 target is presented at >5-fold higher target density¹ than a commonly used MAGEA4 target peptide

¹ Copy number per tumor cell (CpC) measured on a paired-sample basis by AbsQuant®, i.e. comparing MAGEA4 vs. MAGEA4/A8 peptide presentation on same sample, ² Students paired T test

Development of the Right TCR – XCEPTOR® Technology

TCR Discovery and Engineering for ACT and TCR Bispecifics

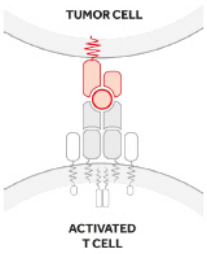
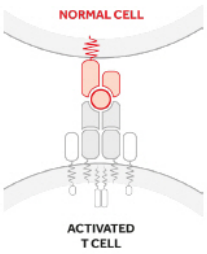
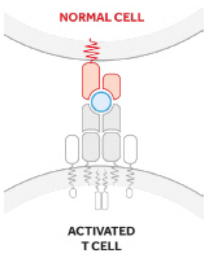
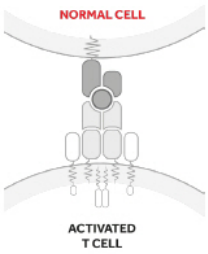


- Fast, efficient and highly sensitive discovery of highly specific, natural TCRs
- Protein engineering capabilities to design and maturate TCRs with increased affinity while retaining specificity
- Early de-selection of cross-reactive TCRs by the unique interplay between Immatics' target and TCR discovery platforms XPRESIDENT® and XCEPTOR® during TCR discovery[1] and TCR maturation[2]

[1] XPRESIDENT®-guided off-target toxicity screening; [2] XPRESIDENT®-guided similar peptide counterselection

Optimal Target Selection & TCR Specificity for Minimizing Safety Risks

Unique Interplay between Technology Platforms Allows Early De-risking for Clinical Development

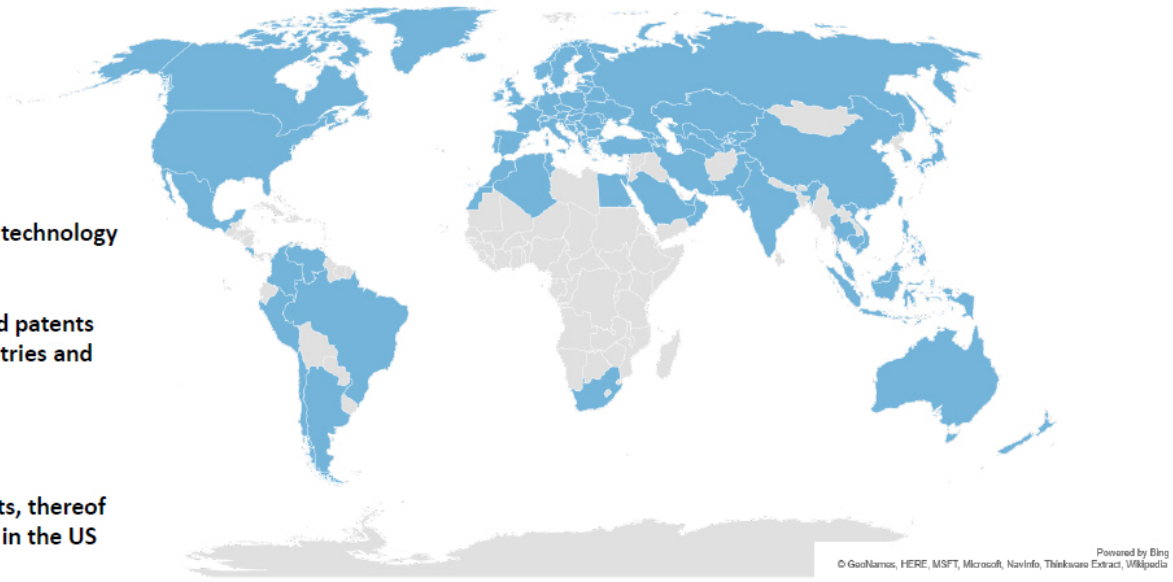
Target peptide presented on tumor cells	Target peptide presented on normal cells	Similar peptide presented on normal cells[1]	A different HLA is recognized on normal cells
			
Selective killing of tumor cells	On-target (off-tumor) toxicity	Off-target toxicity	Alloreactivity

XPRESIDENT®-guided screening for on- and off-target toxicities of TCRs based on the extensive database of peptides presented on normal tissues

[1] Clinical fatalities have occurred in TCR-T trials using a titin cross-reactive TCR (Cameron *et al.*, Sci Transl Med)

Robust IP Portfolio

Immatics' Patent Estate – Territorial Coverage



Cancer targets, TCRs and technology protected by:

- **5,800 applications and patents filed in all major countries and regions**
- **>115 patent families**
- **>2,400 granted patents, thereof >550 granted patents in the US**

Corporate Information & Milestones

Experienced Global Leadership Team Across Europe and the US

Harpreet Singh
Chief Executive Officer
Co-Founder
>20 yrs biotech experience

Arnd Christ
Chief Financial Officer
>20 yrs biotech experience
(InflaRx, Medigene, NovImmune, Probiodrug)

Carsten Reinhardt
Chief Development Officer
>20 yrs pharma & biotech experience
(Micromet, Roche, Fresenius)

Cedrik Britten
Chief Medical Officer
15 yrs pharma & biotech experience
(GSK, BioNTech)

Rainer Kramer
Chief Business Officer
25 yrs pharma & biotech experience
(Amgen, MorphoSys, Jerini, Shire, Signature Dx)

Steffen Walter
Chief Operating Officer
Co-Founder Immatics US
>15 yrs biotech experience

Toni Weinschenk
Chief Innovation Officer
Co-Founder
>15 yrs biotech experience

Edward Sturchio
General Counsel
>15 yrs pharma & biotech experience
(Abeona Therapeutics, AAA, Novartis, Merck, Schering)

Jordan Silverstein
Head of Strategy
>10 yrs biotech experience
(InflaRx, AAA)

Strong, Focused and Highly Integrated Trans-Atlantic Organization

Delivering

the Power of T cells to Cancer Patients

Appendix

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ACTengine® IMA203 TCR-T 1st Gen Monotherapy Tolerability Data

Focus on IMA203 Phase 1b Cohort A – All ≥Grade 3 Adverse Events (N=11)

TEAEs by maximum severity for all patients in Ph1b Cohort A dose expansion (N=11)

Adverse event (System organ class, Preferred term)	≥ Grade 3 No.	≥ Grade 3 %
Patients with any adverse event	**11**	**100.0**
Adverse Events of Special Interest		
Cytokine release syndrome	0	0.0
ICANS[1]	0	0.0
Blood and lymphatic system disorders		
Neutropenia	10	90.9
Lymphopenia	6	54.5
Leukopenia	5	45.5
Anaemia	5	45.5
Thrombocytopenia	4	36.4
Leukocytosis	1	9.1
Lymphocytosis	1	9.1

Adverse event (System organ class, Preferred term)	≥ Grade 3 No.	≥ Grade 3 %
table continued…		
Investigations		
Alanine aminotransferase increased	1	9.1
Aspartate aminotransferase increased	1	9.1
Blood alkaline phosphatase increased	1	9.1
Eye disorders		
Ulcerative keratitis	1	9.1
Gastrointestinal disorders		
Ileus	1	9.1
Infections and infestations		
Infection	1	9.1
Nervous system disorders		
Headache	1	9.1
Respiratory, thoracic and mediastinal disorders		
Laryngeal inflammation	1	9.1

All treatment-emergent adverse events (TEAEs) with ≥ Grade 3 regardless of relatedness to study treatment that occurred in at least 1 patient (except for CRS and ICANS, where only Grade 1-2 occurred; listed for completeness due to being adverse events of special interest) are presented. Adverse events were coded using the Medical Dictionary for Regulatory Activities. Grades were determined according to National Cancer Institute Common Terminology Criteria of Adverse Events, version 5.0. Grades for CRS and ICANS were determined according to CARTOX criteria (Neelapu *et al.*, 2018). Patients are counted only once per adverse event and severity classification. Based on interim data extracted from open clinical database (04-Apr-2023). [1] ICANS: Immune effector cell-associated neurotoxicity syndrome.

- IMA203 was well tolerated
- No Adverse Event ≥Grade 3 was observed with a frequency ≥10% when excluding expected cytopenias associated with lymphodepletion
- No IMA203-related Grade 5 Adverse Events

Deep & Durable Responses in Heavily Pre-Treated Patients – Phase 1b Cohort A

Patient ID	Indication	No of prior treatment lines	Prior treatments	Total infused dose TCR-T cells[1] [x10^9]	BOR	BOR (Max % change of target lesions)	Comment
A-DL5-01	Uveal Melanoma	1	ARRY614/Nivolumab	4.16	cPR	-60.3	Ongoing response 10.1 months post infusion
A-DL4-03	Cut. Melanoma	7	Dabrafenib/Trametinib, Pembrolizumab, Dabrafenib/Trametinib, Vemurafenib/Cobimetinib, Dabrafenib/Trametinib, IMCgp-100, Encorafenib/Binimetinib	1.30	cPR	-73.9	Ongoing response 9.9 months post infusion
A-DL5-03	Cut. Melanoma	3	Interferon, Pembrolizumab, Nivolumab/Ipilimumab	5.12	cPR	-60.5	Ongoing response 6.2 months post infusion
A-DL4-01	Head & Neck Cancer	1	Carboplatin/Paclitaxel	1.92	cPR	-33.3	Response until 5.7 months post infusion
A-DL4-02	Ovarian Cancer	10	Carboplatin/Taxol, Taxol, Gemcitabine/Carboplatin, Olaparib, Letrozole, Rucaparib, UPCC 031118 (CAR-T cell directed folate receptor), Bevacizumab/Cyclophosphamide, Carboplatin, Doxorubicin	1.97	cPR	-41.0	Response until 3.8 months post infusion
A-DL5-05	Ovarian Cancer	3	Adriamycin/Cytotaxan/Taxol, Carboplatin/Taxol, Carboplatin/Doxil	8.84	cPR	-61.7	Ongoing response 2.5 months post infusion
A-DL5-06	Synovial Sarcoma	1	Adriamycin/Ifosfamide/Mesna	3.94	PR	-74.8	Initial PR at week 6, 3-month scan pending
A-DL4-04	Melanoma (Unk. Primary)	2	Nivolumab/Ipilimumab, Nivolumab	1.73	SD	0.0	Disease stabilization until 5.7 months post infusion
A-DL4-05	Cut. Melanoma	5	Nivolumab, Nivolumab (re-exposure), Nivolumab/Ipilimumab, Dabrafenib/Trametinib, Nivolumab	1.63	SD	11.4	Ongoing disease stabilization 2.1 months post infusion
A-DL5-02	Pancreatic Neuroendocrine Tumor	3	Lanreotid, Streptozocin/5-Fluorouracil, Everolismus	5.12	SD	-21.8	Disease stabilization until 2.3 months post infusion
A-DL5-04*	Ovarian Cancer	5	Paclitaxel/Carboplatin, Niraparib, Doxorubicin/Liposomal/Carpoplatin, 2020-0808 ZN-C3/Gemcitabine, 2020-0755 COM 701/BMS-986207/Nivolumab	4.68	PD	50.8	Progressive disease at 1.2 months post infusion

[1] Transduced viable CD8 T cells; PD: Progressive Disease; SD: Stable Disease; PR: Partial Response; cPR: Confirmed Partial Response; BL: Baseline; BOR: Best Overall Response

*Ovarian cancer patient A-DL5-04 erroneously received one dose of nivolumab and is part of intent-to-treat population (shown here) but not per-protocol population.

ACTengine® IMA203 TCR-T 1st Gen Monotherapy Tolerability Data

Phase 1a and Phase 1b Cohort A – All ≥Grade 3 Adverse Events (N=39)

TEAEs by maximum severity for all patients in Ph1a dose escalation and Ph1b Cohort A dose expansion (N=39)[1]

Adverse event (System organ class, Preferred term)	≥ Grade 3 No.	≥ Grade 3 %
Patients with any adverse event	39	100.0
Adverse Events of Special Interest		
Cytokine release syndrome	2	5.1
ICANS[2]	0	0.0
Blood and lymphatic system disorders		
Neutropenia	32	82.1
Lymphopenia	24	61.5
Leukopenia	22	56.4
Anaemia	20	51.3
Thrombocytopenia	15	38.5
Cytopenia	1	2.6
Leukocytosis	1	2.6
Lymphocytosis	1	2.6
Infections and infestations		
Appendicitis	1	2.6
COVID-19	1	2.6
Enterococcal infection	1	2.6
Infection	1	2.6
Orchitis	1	2.6
Sepsis[4,5]	1	2.6
Septic shock[4]	1	2.6
Respiratory, thoracic and mediastinal disorders		
Hypoxia	2	5.1
Bronchial obstruction	1	2.6
Laryngeal inflammation	1	2.6
Pleural effusion	1	2.6
Respiratory failure	1	2.6
Investigations		
Alanine aminotransferase increased	1	2.6
Aspartate aminotransferase increased	1	2.6
Blood alkaline phosphatase increased	1	2.6
Blood creatinine increased	1	2.6
Blood fibrinogen decreased	1	2.6
Gastrointestinal disorders		
Abdominal pain	1	2.6
Diarrhoea	1	2.6
Ileus	1	2.6
Vomiting	1	2.6

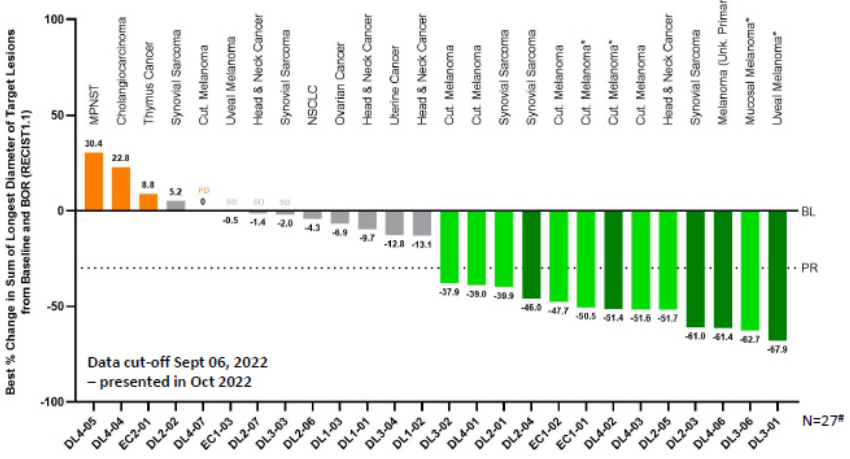
Adverse event (System organ class, Preferred term)	≥ Grade 3 No.	≥ Grade 3 %
table continued…		
General disorders and administration site conditions		
Condition aggravated[4]	1	2.6
Fatigue	1	2.6
Pyrexia	1	2.6
Swelling face	1	2.6
Vascular disorders		
Hypertension	3	7.7
Hypotension	1	2.6
Metabolism and nutrition disorders		
Hypokalaemia	2	5.1
Failure to thrive	1	2.6
Injury, poisoning and procedural complications		
Humerus fracture	1	2.6
Infusion related reaction	1	2.6
Renal and urinary disorders		
Acute kidney injury	1	2.6
Proteinuria	1	2.6
Cardiac disorders		
Atrial fibrillation[3]	1	2.6
Endocrine disorders		
Inappropriate antidiuretic hormone secretion	1	2.6
Eye disorders		
Ulcerative keratitis	1	2.6
Hepatobiliary disorders		
Cholangitis	1	2.6
Immune system disorders		
Contrast media allergy	1	2.6
Musculoskeletal and connective tissue disorders		
Muscle spasms	1	2.6
Nervous system disorders		
Headache	1	2.6
Reproductive system and breast disorders		
Vaginal haemorrhage	1	2.6
Skin and subcutaneous tissue disorders		
Rash maculo-papular	1	2.6

- IMA203 was well tolerated
- No Adverse Event ≥Grade 3 was observed with a frequency ≥10% when excluding expected cytopenias associated with lymphodepletion
- No IMA203-related Grade 5 Adverse Events

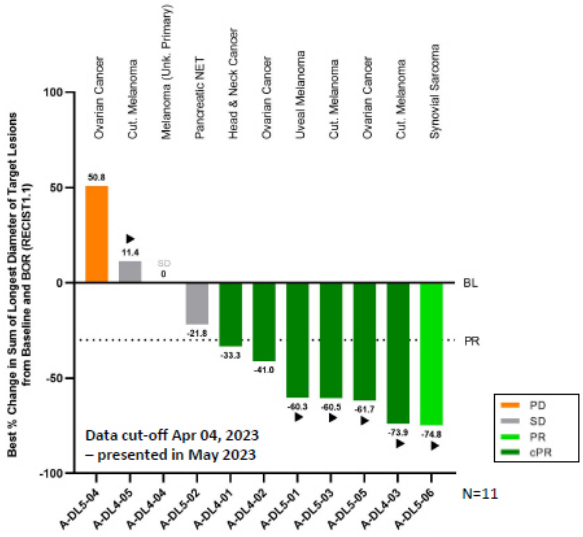
All treatment-emergent adverse events (TEAEs) with ≥ Grade 3 regardless of relatedness to study treatment that occurred in at least 1 patient (except for ICANS, where only Grade 1-2 occurred; listed for completeness due to being an adverse event of special interest) are presented. Adverse events were coded using the Medical Dictionary for Regulatory Activities. Grades were determined according to National Cancer Institute Common Terminology Criteria of Adverse Events, version 5.0. Grades for CRS and ICANS were determined according to CARTOX criteria (Neelapu et al., 2018). Patients are counted only once per adverse event and severity classification. Based on interim data extracted from open clinical database (04-Apr-2023); [1] Two patients with disease progression after first IMA203 infusion received exploratory second IMA203 infusion. They had these ≥ Grade 3 TEAEs only after second infusion, which are included in the table: First patient: Abdominal pain, Cytokine release syndrome, Diarrhoea, Hypokalaemia, Proteinuria; Second patient: Humerus fracture, Muscle spasms, Neutropenia, Thrombocytopenia; [2] ICANS: Immune effector cell-associated neurotoxicity syndrome; [3] DLT: Dose limiting toxicity in phase 1a at DL2 reported on March 17, 2021; [4] Fatal Adverse events were not considered related to any study drug; [5] Patient died from sepsis of unknown origin and did not receive IMA203 TCR-T cells.

Phase 1a and Phase 1b Cohort A – Best Overall Response

Phase 1a (Dose Escalation)



Phase 1b (Cohort A)



Confirmed objective responses across a broad spectrum of different tumor types such as cutaneous melanoma, uveal melanoma, head and neck cancer, ovarian cancer, synovial sarcoma

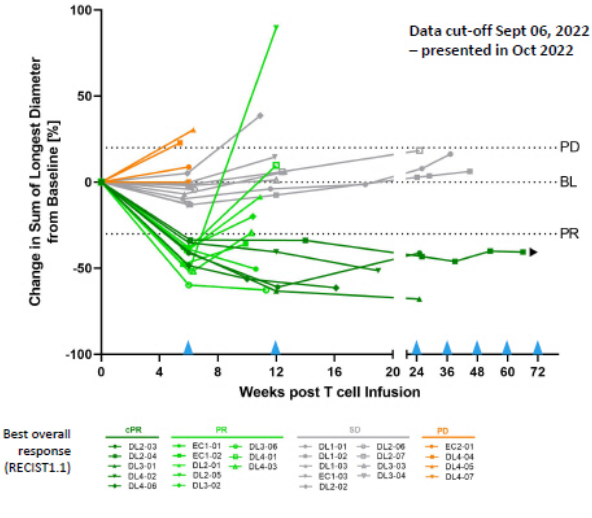
* Maximum change of target lesions and RECIST 1.1 BOR at different timepoints; # Synovial sarcoma patient (DL3) PD at week 6 not shown as target lesions were not evaluable;
‡ Indication was updated to cutaneous melanoma post data cut-off; PD: Progressive disease; SD: Stable disease; PR: Partial response; cPR: Confirmed partial response; BL: Baseline

Phase 1a and Phase 1b Cohort A – Responses over Time

Improved Durability at Higher Dose and in Phase 1b Patients

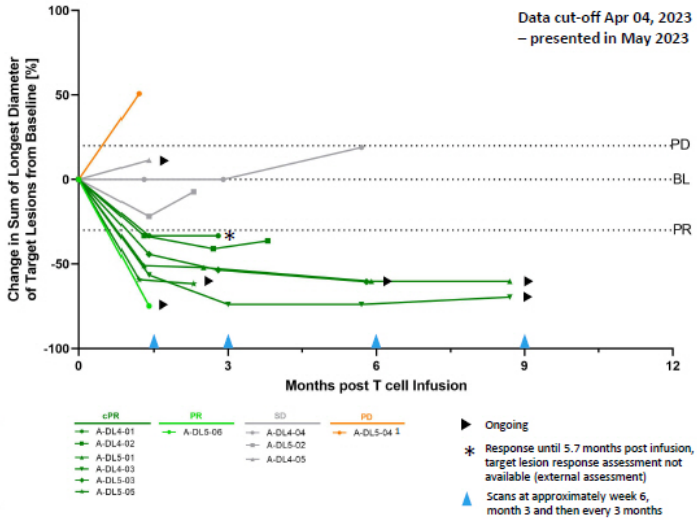
Phase 1a (Dose Escalation)

N=27#



Phase 1b (Cohort A)

N=5



Synovial sarcoma patient (DL3) PD at week 6 not shown as target lesions were not evaluable; 1 Ovarian cancer patient A-DL5-04 erroneously received one dose of nivolumab and is part of intent-to-treat population (shown here) but not per-protocol population; PD: Progressive Disease; SD: Stable Disease; PR: Partial Response; cPR: Confirmed Partial Response; BL: Baseline

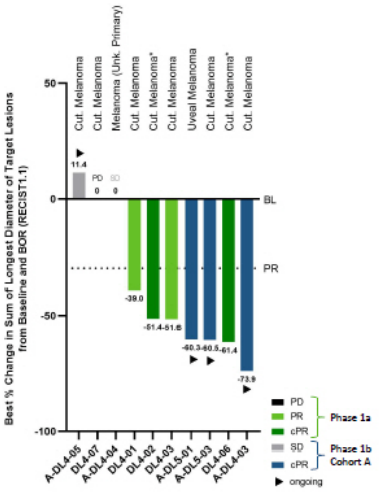
Focus on Melanoma Patients Phase 1a (DL4 only) and Phase 1b Cohort A

Continuous Improvement from Phase 1a to Phase 1b Cohort A

Patient Characteristics (n=10)	
Prior lines of treatment Mean (min, max)	4.5 (1, 7)
Previous lines of CPI Mean (Min, Max)	2.6 (1, 4)
LDH at baseline >1 x ULN [% of patients]	60.0
Baseline tumor burden Mean target lesion sum of diameter [mm] (min, max)	66.9 (21.0, 178.7)
Total infused dose Mean TCR-T cells[1] infused [$x10^9$] (min, max)	2.12 (1.07, 5.12)
No. of Target- & Non-Target Lesions	60.0% with >3 lesions 40.0% with liver/brain lesions

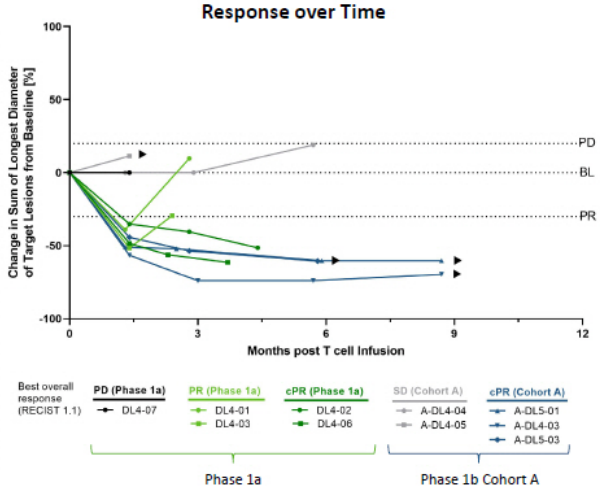
- Heavily pre-treated melanoma patients after 1-4 lines of CPI: Cutaneous (N=8), uveal (N=1) and melanoma of unk. primary (N=1)
- Phase 1a (N=5): previous manufacturing process
- Phase 1b Cohort A (N=5): new monocyte depletion process, higher dose

Best Overall Response



ORR[2] = 70% (7/10)
cORR[3] = 56% (5/9)

Response over Time



Median DOR[4], min, max DOR	Not reached, 2.4, 8.8+ months
Median Follow-up[5]	8.5 months

* Maximum change of target lesions and RECIST 1.1 at different timepoints. [1] Transduced viable CD8 T cells; [2] Initial ORR: Objective response rate according to RECIST 1.1 at first scan post infusion at ~week 6; [3] Confirmed ORR (cORR): Confirmed objective response rate according to RECIST 1.1 for patients with available second scan post infusion at ~3 months or patients with progressive disease (PD) at any timepoint before this scan; [4] Duration of response (DOR) in confirmed responders is defined as time from first documented response until disease progression/death. Patients with ongoing response will be censored at date of data cut-off. Median DOR is analyzed by using the Kaplan-Meier method; [5] Median Follow-up is analyzed by using the reverse Kaplan-Meier method; PD: Progressive Disease; SD: Stable Disease; PR: Partial Response; cPR: Confirmed Partial Response; BOR: Best Overall Response; BL: Baseline; CPI: Checkpoint inhibitor; LDH: Lactate dehydrogenase

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