

# Phase 1 Trial Results for IMA203CD8, a PRAME-Targeted T-cell Receptor (TCR) T-cell Therapy, in Ovarian Cancer

Antonia Busse<sup>1</sup>, Winfried Alsdorf<sup>2</sup>, Oladapo O. Yeku<sup>3</sup>, Sarah E. Taylor<sup>4</sup>, Dejka M. Araujo<sup>5</sup>, Dirk Jaeger<sup>6</sup>, Katrin Wetzko<sup>7</sup>, Amir A. Jazaeri<sup>8</sup>, Samer Ali Srour<sup>8</sup>, Martin Wermke<sup>9</sup>, Alexander Mustea<sup>10</sup>, Friedrich Vollmer<sup>11</sup>, Norbert Hilf<sup>11</sup>, Nataliia Chorna<sup>11</sup>, Cedrik Michael Britten<sup>11</sup>, Tobias Albert Wilhelm Holderried<sup>12</sup>

<sup>1</sup>Charite Medical University Hospital, Berlin, Germany; <sup>2</sup>Department of Hematology and Oncology University Hospital Hamburg Eppendorf, Hamburg, Germany; <sup>3</sup>Massachusetts General Hospital, Harvard Medical School, Boston, MA; <sup>4</sup>Department of Obstetrics, Gynecology and Reproductive Services, University of Pittsburgh Medical Center, Pittsburgh, PA; <sup>5</sup>MD Anderson Cancer Center, Houston, TX; <sup>6</sup>Department of Medical Oncology, National Center for Tumor Diseases (NCT), Heidelberg University Hospital, Heidelberg, Germany; <sup>7</sup>University Hospital Dresden, Dresden, Germany; <sup>8</sup>The University of Texas MD Anderson Cancer Center, Houston, TX; <sup>9</sup>TU Dresden University of Technology, NCT/UCC Early Clinical Trial Unit, Dresden, Germany; <sup>10</sup>Department of Gynecology and Gynecological Oncology, Bonn University Hospital, Bonn, Germany; <sup>11</sup>Immatics Biotechnologies GmbH, Tübingen, Germany; <sup>12</sup>University of Bonn, University Hospital Bonn, Medical Clinic and Polyclinic III Internal Medicine with a focus on Oncology, Hematology, and Rheumatology, Bonn, Germany

# Disclosures

## Employment

No Relationships to Disclose

## Leadership

No Relationships to Disclose

## Stock and Other Ownership Interests

No Relationships to Disclose

## Honoraria

No Relationships to Disclose

## Consulting or Advisory Role

No Relationships to Disclose

## Speakers' Bureau

No Relationships to Disclose

## Research Funding

No Relationships to Disclose

## Patents, Royalties, Other Intellectual Property

No Relationships to Disclose

## Expert Testimony

No Relationships to Disclose

## Travel, Accommodations, Expenses

Cerus, Gilead Sciences, Kite, a Gilead company, Johnson & Johnson/Janssen

## Other Relationship

No Relationships to Disclose

# Key Takeaways

- TCR-based therapies enable immune recognition of intracellular tumor antigens presented by cell-surface HLA, expanding the therapeutic landscape beyond targets accessible to conventional immunotherapies
- IMA203CD8 is a one-time autologous TCR T-cell therapy targeting the cancer-associated antigen PRAME, which is broadly expressed in gynecologic cancers and represents a novel target for immunotherapies in this patient population
- IMA203CD8 demonstrates a predictable and manageable tolerability profile and encouraging dose-dependent activity in patients with advanced gynecologic cancers
- These findings support further development of IMA203CD8 to define its therapeutic potential in patients with gynecologic and other PRAME-positive cancers

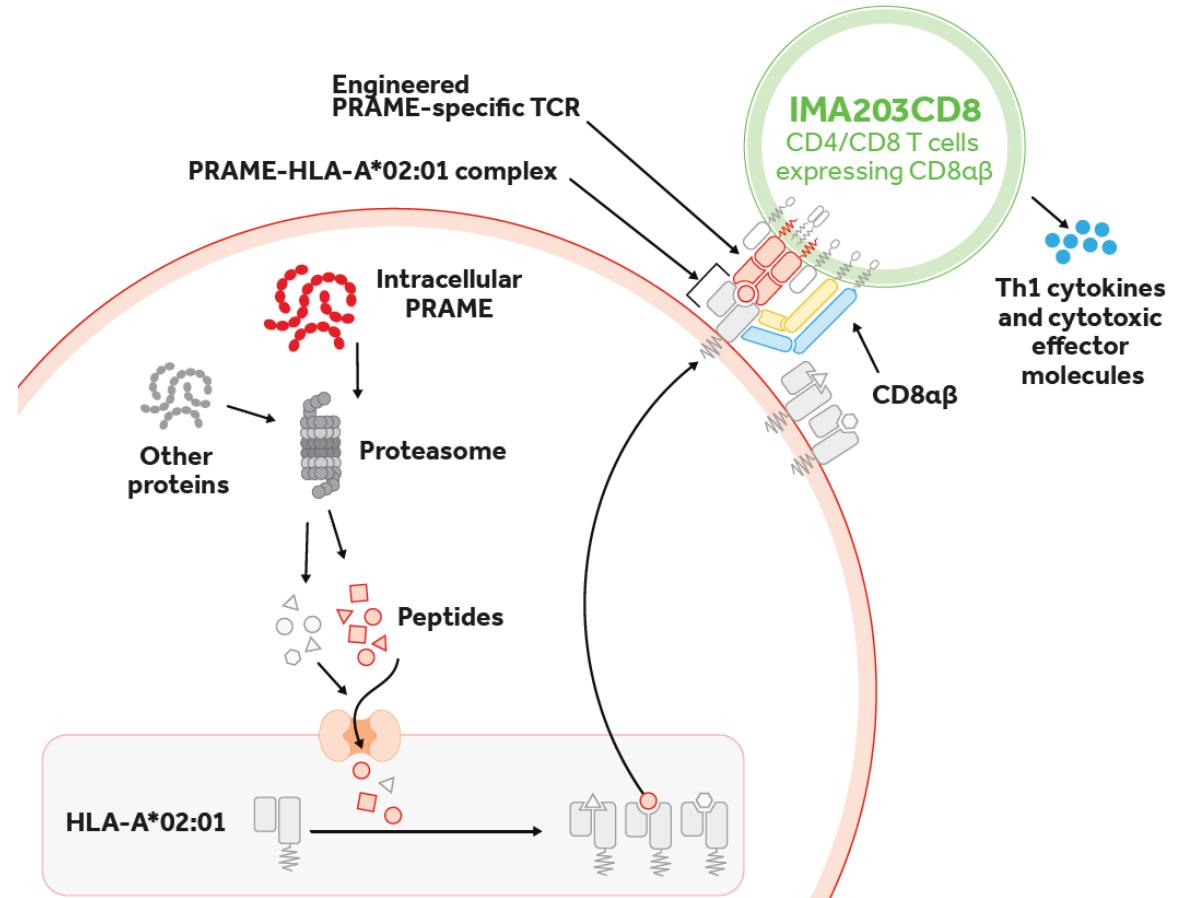
HLA: human leukocyte antigen; PRAME: preferentially expressed antigen in melanoma; TCR: T-cell receptor

# IMA203CD8 is a Systemic TCR T-cell Therapy Designed to Target the Intracellular Tumor Antigen PRAME

PRAME is expressed in >50 cancers

Indication	% PRAME+ patients <sup>a</sup>
Cutaneous Melanoma	95%
<b>Uterine Carcinoma</b>	<b>95%</b>
<b>Uterine Carcinosarcoma</b>	<b>95%</b>
Synovial Sarcoma	95%
Uveal Melanoma	90%
Mucosal Melanoma	90%
<b>Ovarian Carcinoma Subtypes<sup>b</sup></b>	<b>85%</b>
Squamous Cell NSCLC	70%
Triple-negative Breast Carcinoma	65%
Small Cell Lung Cancer	45%
Esophageal Carcinoma Subtype	45%
Kidney Carcinoma Subtype	40%
Cholangiocarcinoma	35%
HER2-Enriched Breast Carcinoma	30%
Adenocarcinoma NSCLC	25%
Head & Neck Squamous Cell Carcinoma	25%
Hepatocellular Carcinoma	20%
Bladder Carcinoma	20%

## Mechanism of action



IMA203CD8 is an investigational therapy and its use has not been proven to be safe or effective. It has not been approved by the FDA or any other regulatory agency outside of the US.

<sup>a</sup> Data on file: PRAME target prevalence is based on a proprietary mass spec-guided expression threshold applied to RNAseq data (approximate values; values between 95-100% shown as 95%). <sup>b</sup> Includes the following subtypes: clear cell carcinoma, endometrioid carcinoma, serous cystadenocarcinoma; HLA, human leukocyte antigen; NSCLC, non-small cell lung cancer; PRAME, preferentially expressed antigen in melanoma; TCR, T-cell receptor.

# Phase 1 Multicenter Trial of IMA203CD8 in PRAME+ Solid Tumors

## Key Objectives

### Primary:

- Tolerability
- Determination of RP2D

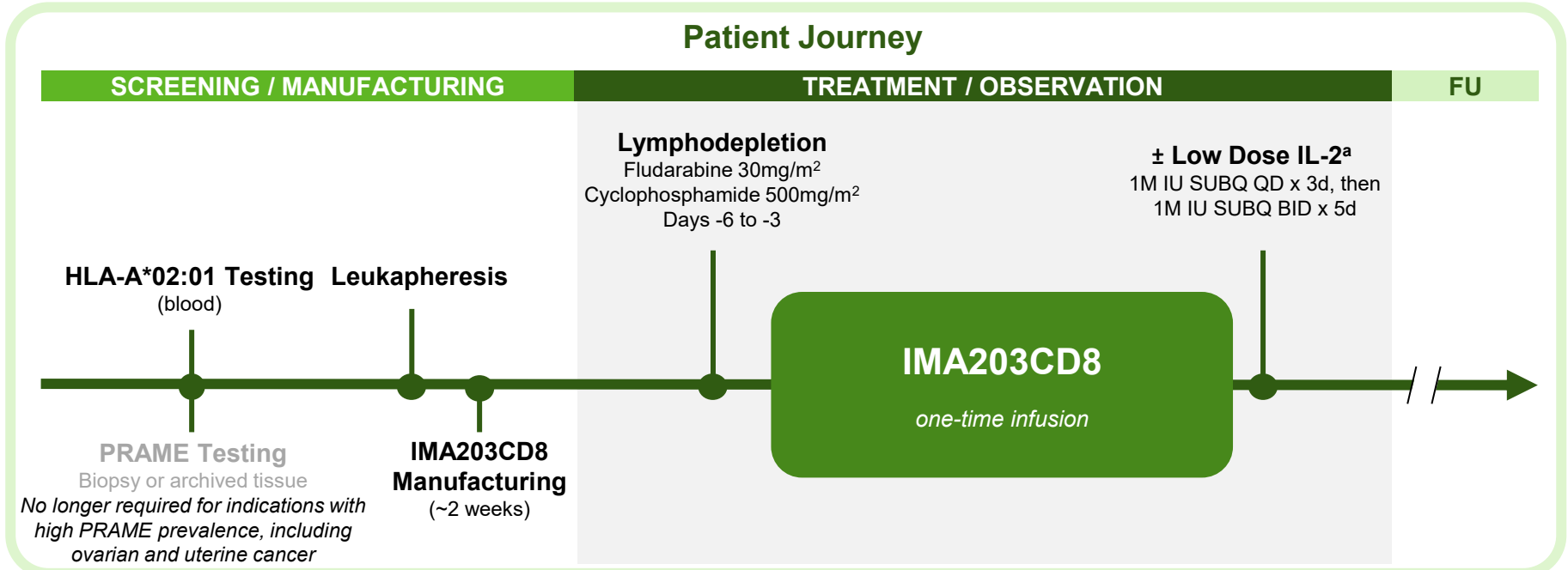
### Secondary:

- Efficacy
- Pharmacokinetics

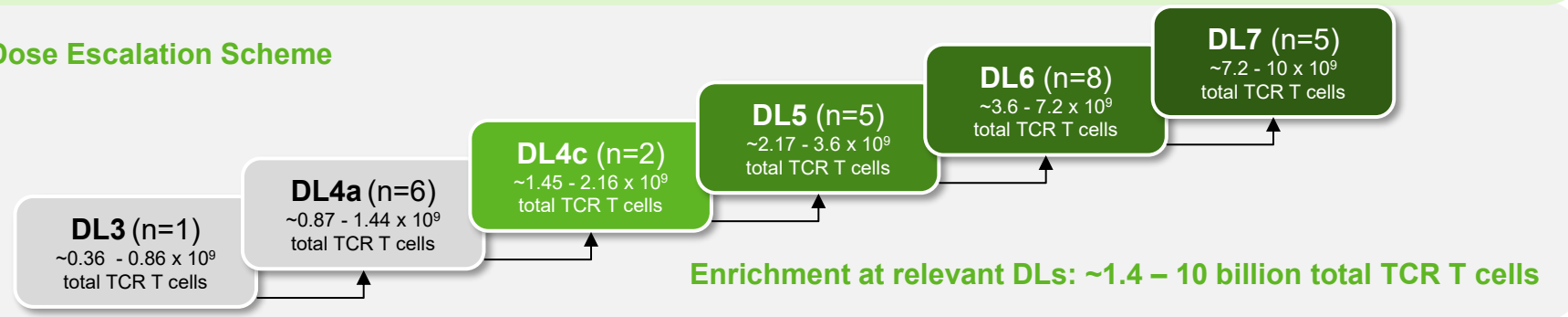
## Key Eligibility Criteria

- Advanced or metastatic solid tumors
- Age  $\geq$  18 years
- ECOG PS 0-1
- HLA-A\*02:01 positive
- PRAME positive
- No available SOC treatment options
- Measurable disease (RECIST 1.1)
- Adequate organ function

## Patient Journey

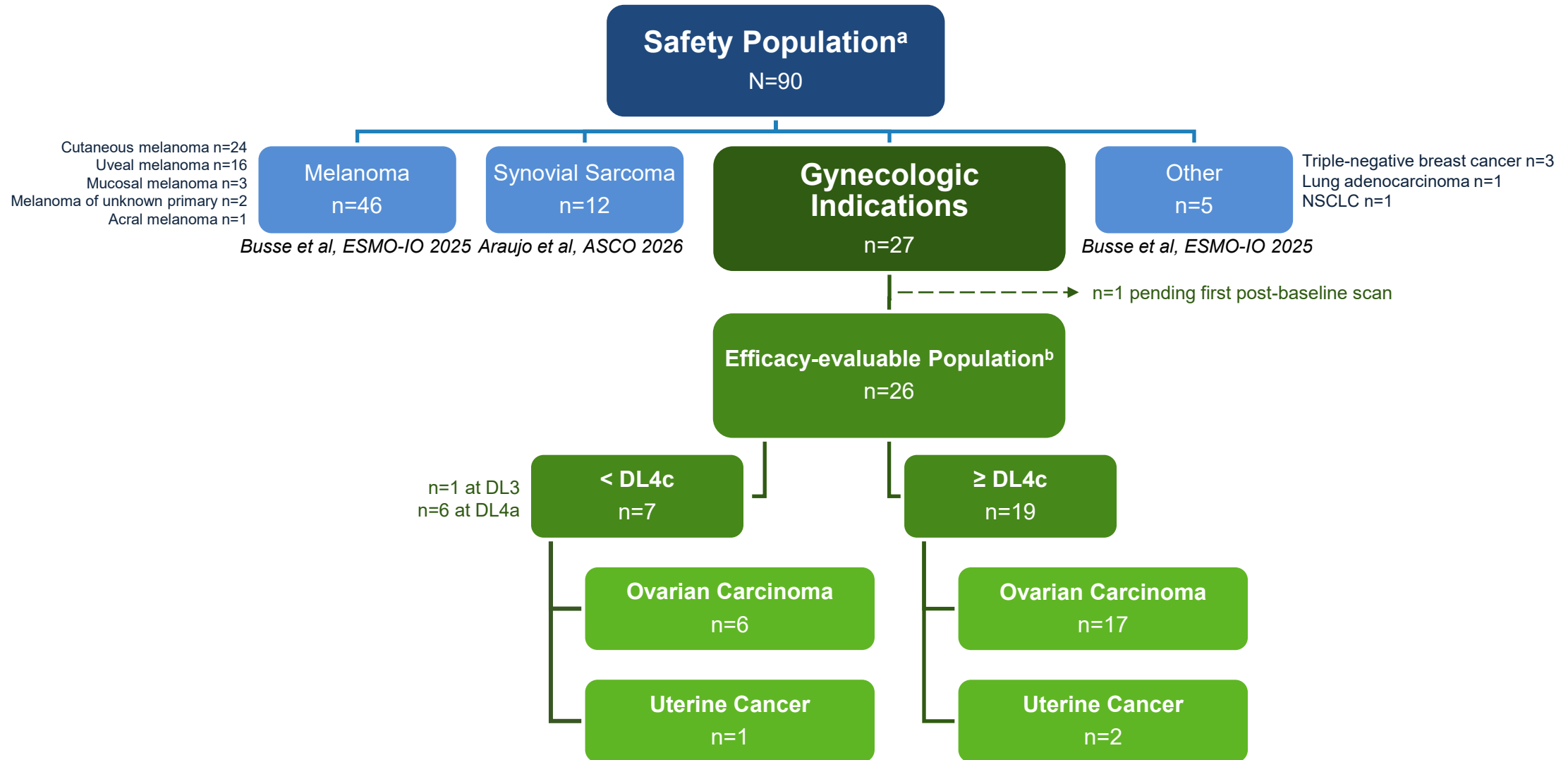


## Dose Escalation Scheme



IMA203-101: NCT03686124; Based on initial safety data observed with anzu-cel (IMA203), IMA203CD8 dose escalation was initiated at DL3. Total TCR T cells calculated from defined number of TCR T cells/m<sup>2</sup> BSA per dose level x 1.8 m<sup>2</sup> BSA; <sup>a</sup>Dose level  $\geq$  DL4c is evaluated  $\pm$ IL-2, starting without IL-2. If tolerable, add IL-2 at the same dose or escalate to next dose without IL-2; outpt IL-2 admin. at investigator's discretion. BID, twice daily; BSA, body surface area; DL, dose level; ECOG PS, Eastern Cooperative Oncology Group Performance Status; FU, follow-up; IL, interleukin; IU, international unit; PRAME, preferentially expressed antigen in melanoma; QD, daily; SOC, standard of care; SUBQ, subcutaneous; TCR, T-cell receptor.

# Patient Disposition



<sup>a</sup> All patients who started lymphodepletion; <sup>b</sup> All patients who received IMA203CD8 infusion and had at least one post-baseline scan, progressive disease or death; DL, dose level; NSCLC, non-small cell lung cancer.

# Patients Were Heavily Pretreated with Limited Treatment Options

## Baseline Characteristics

	Ovarian Carcinoma	Uterine Cancer <sup>a</sup>
	n=24	n=3
<b>Age</b> , median (range)	60 (35, 75)	52 (49, 55)
<b>ECOG PS 1</b> , n (%)	10 (42)	0
<b>LDH</b> ≥1 x ULN, n (%)	8 (33)	2 (67)
<b>Tumor burden</b> Target lesion SLD [cm], median (range)	6.2 (1.5, 21.6)	8.1 (1.1, 12.4)
<b>Number of target tumor lesions</b> , median (range)	2 (1, 5)	4 (1, 4)
<b>Cancer subtype, high-grade serous</b> , n (%)	21 (88)	1 (33)
<b>Liver metastasis</b> , n (%)	10 (42)	2 (67)
<b>Peritoneal disease</b> , n (%)	17 (71)	3 (100)
<b>Platinum-resistant</b> , n (%)	19 (79)	na

## Treatment Experience

	Ovarian Carcinoma	Uterine Cancer <sup>a</sup>
	n=24	n=3
<b>Prior treatment</b> , n (%)		
Radiation	4 (17)	1 (33)
Systemic treatment	24 (100)	3 (100)
<b>Prior lines of systemic treatment</b>		
Median, (range)	4 (1, 7)	2 (1, 3)
≥3, n (%)	22 (92)	1 (33)
Lines post-platinum resistance, med (range)	1 (0, 2)	na
Chemotherapy, n (%)	24 (100)	3 (100)
Lines of chemotherapy, median (range)	3 (1, 5)	1 (1, 1)
Platinum-based regimen, n (%)	24 (100)	3 (100)
Lines of platinum-based regimen, median (range)	3 (1, 4)	1 (1, 1)
Targeted therapies, n (%)		
Bevacizumab	18 (75)	-
PARPi	17 (71)	-
Checkpoint inhibitors	2 (8)	3 (100)
<b>Dose</b>	<b>n=24</b>	<b>n=3</b>
<b>Total infused dose</b> TCR T cells [x10 <sup>9</sup> ], median (range)	3.3 (0.5, 12.5)	3.2 (1.3, 10.1)

n=27, includes all patients who started lymphodepletion; <sup>a</sup> Includes 1 patient with endometrial carcinoma; ADC, antibody-drug-conjugate; ECOG PS, Eastern Cooperative Oncology Group Performance Status; LDH, lactate dehydrogenase; na, not applicable; PARPi, PARP inhibitor; SLD, sum of longest diameter(s); TCR, T-cell receptor; ULN, upper limit of normal.

# Safety in Patients with Gynecologic Indications (n=27<sup>a</sup>)

## TEAEs in ≥25% of patients

Preferred term, n (%)	Any Time	
	Any grade	Grade ≥3
Nausea	22 (81)	0
Neutropenia	20 (74)	20 (74)
Anaemia	18 (67)	17 (63)
Rash	16 (59)	3 (11)
Thrombocytopenia	16 (59)	11 (41)
Abdominal pain	13 (48)	2 (7)
Vomiting	12 (44)	0
Fatigue	11 (41)	0
Hypokalaemia	10 (37)	1 (4)
Constipation	9 (33)	0
Lymphopenia	9 (33)	9 (33)
Hypophosphataemia	8 (30)	2 (7)
Pyrexia	8 (30)	0
Hypomagnesaemia	7 (26)	1 (4)
Hyponatraemia	7 (26)	0

## Adverse events of special interest

	Any Time
<b>CRS, any grade, n (%)</b>	<b>26 (96)</b>
Grade 1	12 (44)
Grade 2	12 (44)
Grade 3	2 (7)
<b>HLH, any grade, n (%)</b>	<b>2 (7)</b>
Grade 1	0
Grade 2	1 (4)
Grade 3	0
Grade 4	1 (4)
<b>ICANS, any grade, n (%)</b>	<b>2 (7)</b>
Grade 1	1 (4)
Grade 2	0
Grade 3	1 (4)

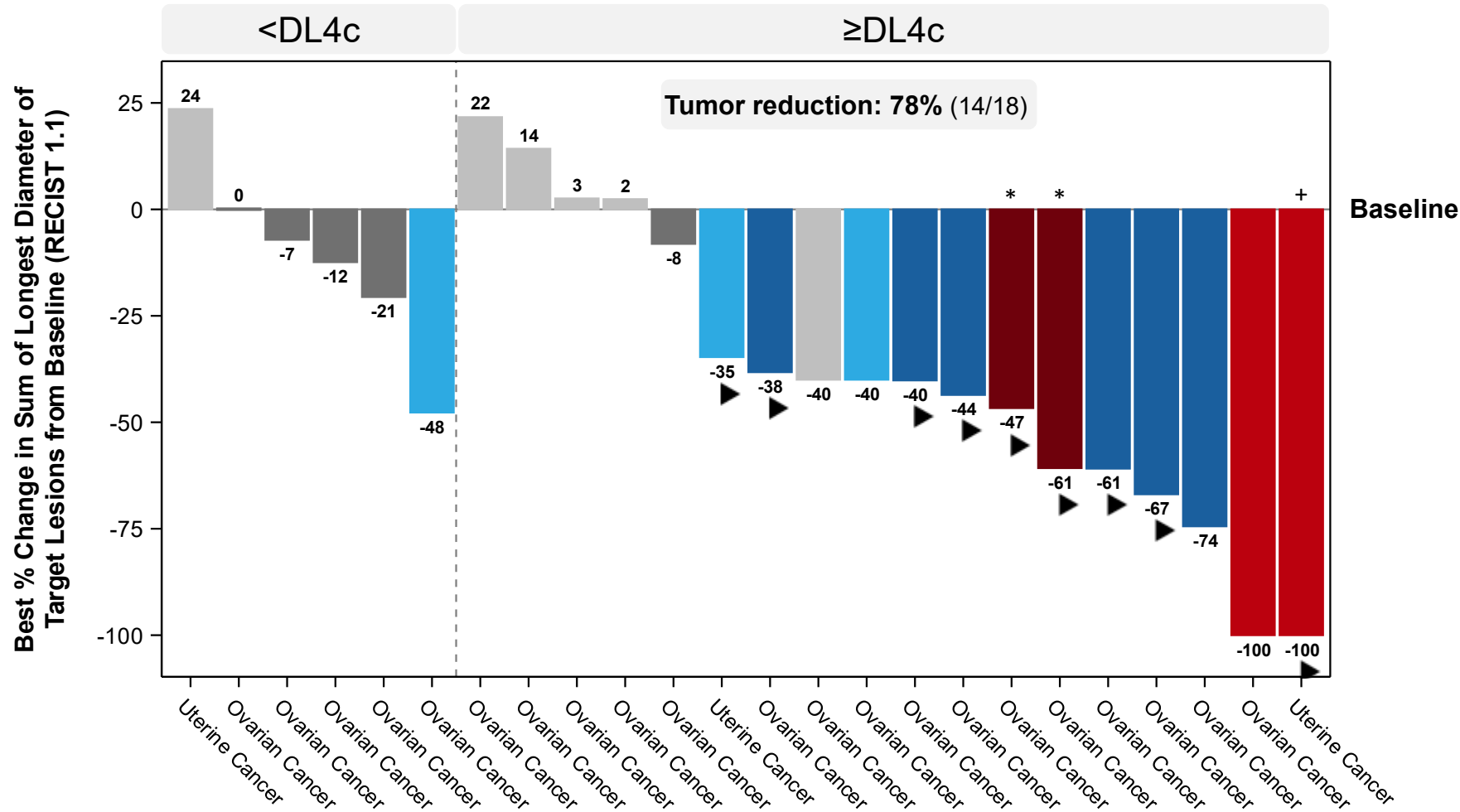
## Overall manageable tolerability profile

- Most frequent TEAEs were anticipated cytopenias associated with lymphodepletion
- Expected and manageable CRS, mostly grade 1-2, consistent with mechanism of action
- 2 DLTs:
  - DL5: Grade 3 ICANS
  - DL7: Grade 4 skin infection
- MTD not reached
- No IMA203CD8-related grade 5 events<sup>b</sup>

Tolerability across all indications: Busse et al ESMO-IO, 2025.

<sup>a</sup> Includes all patients who started lymphodepletion; <sup>b</sup> One grade 5 event at DL4a (~1.4 billion total TCR T cells) was deemed to be unlikely related to IMA203CD8 by investigator. Patient died from sepsis in the setting of IEC-HS. This event led to further modifications of eligibility criteria to exclude patients at higher risk for infectious complications or severe immune-related toxicities, together with IL-2 de-intensification; no further treatment-emergent fatal events were observed with escalating doses up to ~10 billion total TCR T cells. AE, adverse event; CRS, cytokine release syndrome; d, day; DL, dose level; DLT, dose-limiting toxicity; HLH, hemophagocytic lymphohistiocytosis; ICANS, immune effector cell-associated neurotoxicity syndrome; TCR, T-cell receptor; TEAE, treatment-emergent adverse event.

# BOR in Patients with Gynecologic Indications at All DL (n=26<sup>a</sup>)



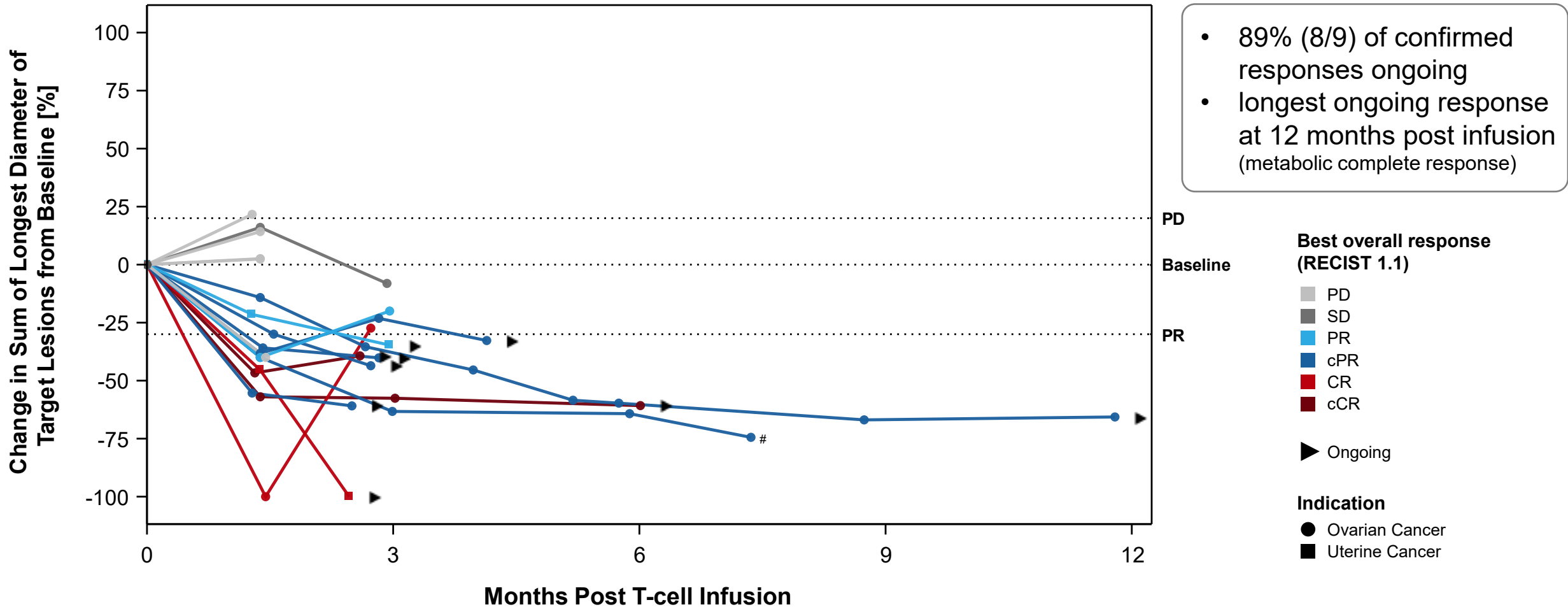
Evaluable patients ≥DL4c	
ORR <sup>b</sup>	63% (12/19)
cORR <sup>c</sup>	50% (9/18)
DCR (at week 6)	68% (13/19)

**Best overall response (RECIST 1.1)**

- PD
- SD
- PR
- cPR
- CR
- cCR
- ▶ Ongoing

<sup>a</sup> Two patients with ovarian cancer at DL4a and DL5 deceased prior to first post-BL scan non-evaluable for assessment of tumor reduction, not depicted in plot but assessed for ORR calculation; <sup>b</sup> ORR: according to RECIST 1.1 at any post-BL scan, PD or death at any prior timepoint; <sup>c</sup> Confirmed ORR for patients with ≥2 post-BL scans per RECIST 1.1, PD or death at any prior timepoint, those with ongoing unconfirmed PR/CR were excluded. \* For those patients who achieved a (c)CR with <100% changes from baseline, target lesions were lymph nodes that resolved to <10 mm per RECIST 1.1; + Patient had a PR prior to CR. BL, baseline; BOR, best overall response; (c)CR, (confirmed) complete response; DCR, disease control rate; DL, dose level; (c)ORR, (confirmed) objective response rate; PD, progressive disease; (c)PR, (confirmed) partial response; SD, stable disease.

# Changes in Tumor Size Over Time in Patients with Gynecologic Indications at $\geq$ DL4c (n=19<sup>a</sup>)



- 89% (8/9) of confirmed responses ongoing
- longest ongoing response at 12 months post infusion (metabolic complete response)

<sup>a</sup> One patient with ovarian cancer at DL5 deceased prior to first post-BL scan non-evaluable for assessment of tumor reduction, not depicted in plot but assessed for ORR calculation. For those patients who achieved a (c)CR with <100% changes from baseline, target lesions were lymph nodes that resolved to <10 mm per RECIST 1.1; # Ongoing confirmed PR (RECIST 1.1) as of last scan at month 7.5, suspected clinical progression by clinical site at month 6 in discrepancy to RECIST response due to tumor marker increase; patient off study at month 8 and receiving further anti-tumor treatment. BOR, best overall response; (c)CR, (confirmed) complete response; DCR, disease control rate; (c)ORR, (confirmed) objective response rate; PD, progressive disease; (c)PR, (confirmed) partial response; SD, stable disease.

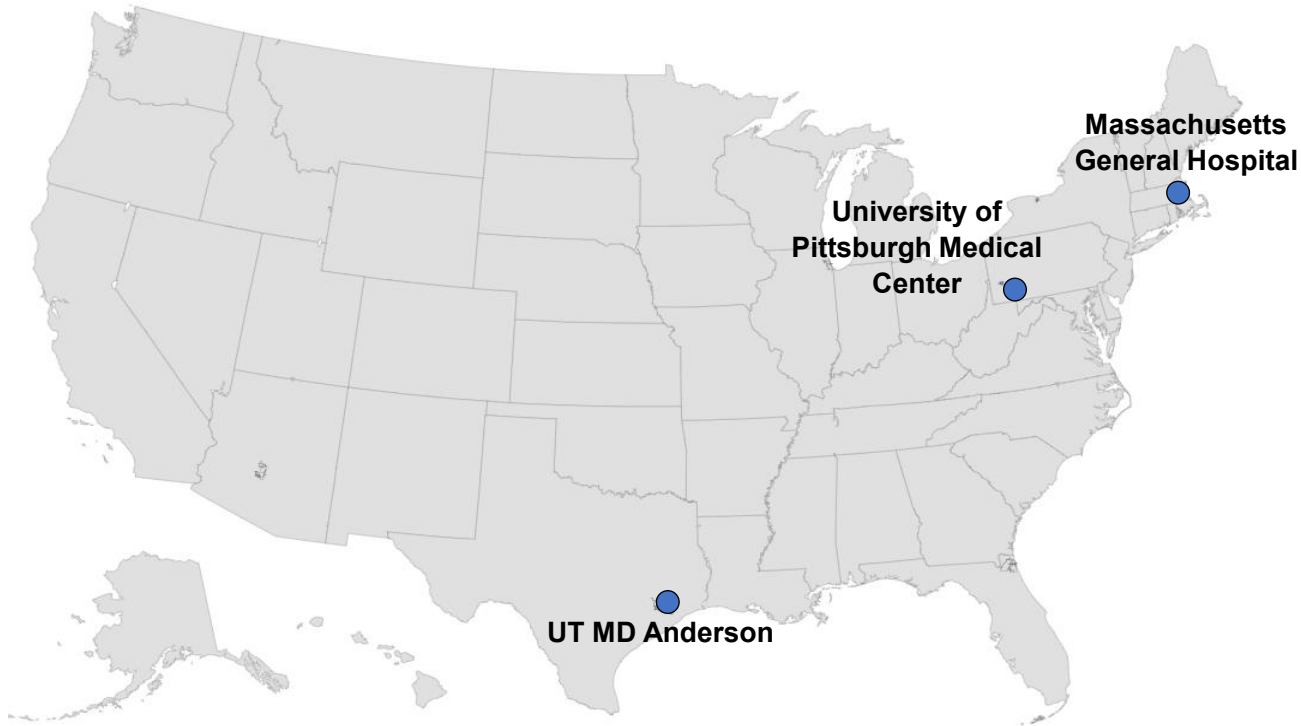
# Conclusions

- TCR-based therapies enable immune recognition of intracellular tumor antigens presented by cell-surface HLA, expanding the therapeutic landscape beyond targets accessible to conventional immunotherapies
- IMA203CD8 is a one-time autologous TCR T-cell therapy targeting the cancer-associated antigen PRAME, which is broadly expressed in gynecologic cancers and represents a novel target for immunotherapies in this patient population
- IMA203CD8 demonstrates a predictable and manageable tolerability profile and encouraging dose-dependent activity in patients with advanced gynecologic cancers
- These findings support further development of IMA203CD8 to define its therapeutic potential in patients with gynecologic and other PRAME-positive cancers

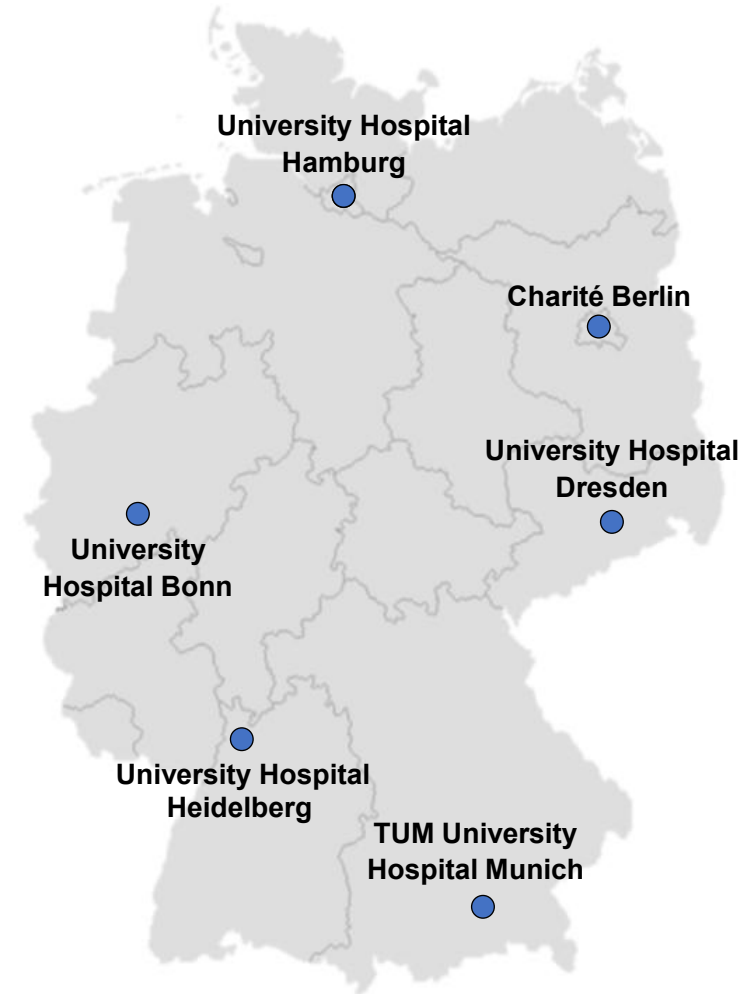
HLA, human leukocyte antigen; PRAME, preferentially expressed antigen in melanoma; TCR, T-cell receptor.

# Thank You – Trial Participants & Caregivers

## United States



## Germany



**IMA203-101 Phase 1 Trial**  
**(patients with gynecologic indications)**  
**Sponsor: Immatics**

# Presentation Materials

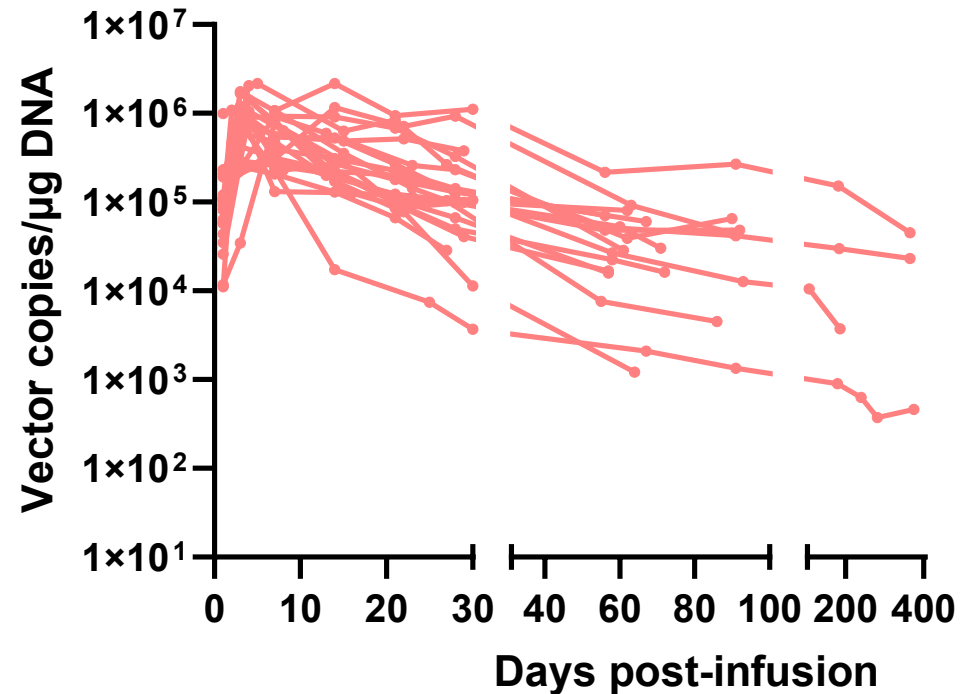


## Presentation Slides

Copies of this slide deck obtained through Quick Response (QR) Code are for personal use only and may not be reproduced without permission from ASCO® or the author of this slide deck.

# Appendix

# Long-Term IMA203CD8 T-cell Persistence in Peripheral Blood



Sustained persistence of IMA203CD8 T cells beyond 1-year post-infusion represents an important prerequisite for durable clinical benefit

# Patients with Gynecologic Cancers Treated with IMA203CD8 at Doses $\geq$ DL4c in Phase 1 (n=19)

Indication	No of prior systemic treatment lines	Prior treatments	Total infused dose TCR-T cells <sup>1</sup> [x10 <sup>9</sup> ]	DL	BOR	BOR (Max % change of target lesions)	Comment	Reason for Progression
Uterine Cancer	1	Pembrolizumab + Chemotherapy (carboplatin, paclitaxel)	3.15E+09	5	CR	-100	Ongoing response at 5.3 months PFS, deepened from initial PR	
OC, Fall tupe, perit.	4	Bevacizumab + chemotherapy (carboplatin, paclitaxel) PARPi Chemotherapy (caelyx, carboplatin) PARPi	3.08E+09	5	CR	-100	Response until 2.8 months PFS	Target lesion progression, new lesions
OC, Fall tupe, perit.	5	Chemotherapy (carboplatin, paclitaxel) Bevacizumab + chemotherapy (carboplatin, paclitaxel) PARPi + chemotherapy (caelyx, carboplatin) Chemotherapy (carboplatin, cisplatin, gemcitabine) Chemotherapy (paclitaxel)	2.30E+09	5	cPR	-74.4	Response until 7.4 months PFS	Suspected clinical progression by clinical site in discrepancy to RECIST response due to tumor marker increase
OC, Fall tupe, perit.	4	Chemotherapy (carboplatin, paclitaxel) Bevacizumab + chemotherapy (carboplatin, paclitaxel) PARPi + chemotherapy (carboplatin, gemcitabine) Chemotherapy (carboplatin, doxorubicin)	7.07E+09	6	cPR	-66.9	Ongoing response at 12.2 months PFS; metabolic complete response	
OC, Fall tupe, perit.	5	Bevacizumab + chemotherapy (carboplatin, paclitaxel) Chemotherapy (carboplatin, doxorubicin) Chemotherapy (carboplatin, gemcitabine) Chemotherapy (paclitaxel) Chemotherapy (docetaxel)	6.22E+09	6	cCR	-60.8	Ongoing response at 6.2 months PFS	
OC, Fall tupe, perit.	1	Chemotherapy (carboplatin, paclitaxel)	1.43E+09	4c	cCR	-46.7	Ongoing response at 5.3 months PFS	
OC, Fall tupe, perit.	6	Chemotherapy (carboplatin, taxol) PARPi Chemotherapy (carboplatin, caelyx) PARPi PARPi Chemotherapy (carboplatin, gemcitabine) Bevacizumab + PARPi + chemotherapy (paclitaxel, docetaxel, carboplatin)	6.59E+09	6	cPR	-43.6	Ongoing response at 4.6 months PFS	
OC, Fall tupe, perit.	3	Chemotherapy (doxorubicin, carboplatin, gemcitabine) Chemotherapy (carboplatin, cyclophosphamide)	4.16E+09	6	cPR	-40.2	Ongoing response at 3.0 months PFS	
OC, Fall tupe, perit.	4	Chemotherapy (carboplatin, taxol) Chemotherapy (carboplatin, gemcitabine) Chemotherapy (mitomycin) Chemotherapy (cisplatin, paclitaxel)	12.5E+9	7	cPR	-38.2	Ongoing response at 5.3 months PFS	

BOR, best overall response; DL, dose level; (c)CR, (confirmed) complete response; cPR, confirmed partial response; OC, ovarian cancer; PARPi, PARP inhibitor; PFS, progression free survival.

# Patients with Gynecologic Cancers Treated with IMA203CD8 at Doses $\geq$ DL4c in Phase 1 (n=19)

Indication	No of prior systemic treatment lines	Prior treatments	Total infused dose TCR-T cells <sup>1</sup> [x10 <sup>9</sup> ]	DL	BOR	BOR (Max % change of target lesions)	Comment	Reason for Progression
OC, Fall tupe, perit.	1	Chemotherapy (carboplatin, paclitaxel)	7.48E+09	7	cPR	-60.9	Ongoing response at 2.5 months PFS	
OC, Fall tupe, perit.	4	Chemotherapy (carboplatin, paclitaxel) Chemotherapy (carboplatin, gemcitabine) PARPi + ICI + exp. Therapy Chemotherapy (paclitaxel)	11.0E+9	7	PR	-40	Unconfirmed response until 3.0 months PFS	Target and Non-target lesion progression
Uterine Cancer	3	Chemotherapy (carboplatin, paclitaxel) Exp. therapy (selinexor) TKI + ICI	10.1E+9	7	PR	-34.7	Ongoing unconfirmed response at 4.5 months PFS, deepened from initial SD	
OC, Fall tupe, perit.	5	Chemotherapy (carboplatin, taxol) Chemotherapy (carboplatin, paclitaxel) Bevacizumab Exp. therapy (AVB-001) Bevacizumab + Chemotherapy (carboplatin, gemcitabine, gemzar)	2.26E+09	4c	SD	-8.1	Disease stabilization until 3.0 months PFS	New lesions
OC, Fall tupe, perit.	4	PARPi + chemotherapy (carboplatin, paclitaxel) Bevacizumab PARPi + chemotherapy (caelyx, carboplatin) Chemotherapy (topotecan)	3.55E+09	6	PD	-40	Progressive disease at 1.5 months PFS	Target and non-target progression, new lesions
OC, Fall tupe, perit.	3	Bevacizumab + PARPi + chemotherapy (carboplatin, paclitaxel) Chemotherapy (carboplatin, doxorubicin) Chemotherapy (paclitaxel)	5.38E+09	6	PD	2.4	Progressive disease at 1.4 months PFS	New lesions
OC, Fall tupe, perit.	4	Chemotherapy (carboplatin, paclitaxel) Bevacizumab + PARPi + chemotherapy (carboplatin, doxorubicin) Mirvetuximab Chemotherapy (topotecan)	6.46E+09	6	PD	2.6	Progressive disease at 1.4 months PFS	Non-target progression
OC, Fall tupe, perit.	3	PARPi + chemotherapy (carboplatin, taxol) Bevacizumab + chemotherapy (carboplatin, doxorubicin) ADC (PRO1184)	3.02E+09	5	PD	14.2	Progressive disease at 1.4 months PFS	Target and non-target progression, new lesions
OC, Fall tupe, perit.	3	Chemotherapy (carboplatin, paclitaxel) PARPi Chemotherapy (carboplatin, doxorubicin) Bevacizumab + chemotherapy (carboplatin, paclitaxel)	6.42E+09	7	PD	21.7	Progressive disease at 1.3 months PFS	Target lesion progression, new lesions
OC, Fall tupe, perit.	3	Chemotherapy (caelyx, carboplatin) Chemotherapy (carboplatin, gemcitabine)	3.04E+09	5	PD	n/a	Progressive disease at 1.1 months	Death

BOR, best overall response; DL, dose level; (c)PR, (confirmed) partial response; SD, stable disease; PD, progressive disease; PARPi, PARP inhibitor; OC, ovarian cancer; PFS, progression free survival.