Ad Rawcliffe, CEO, and Elliot Norry, CMO

Building a cell therapy franchise:
SURPASS Phase 1 trial data at ESMO
September 13, 2021

Adaptimmune
TRANSFORMING T CELL THERAPY

Disclaimer

This presentation contains “forward-looking statements,” as that term is defined under the Private Securities Litigation Reform Act of 1995 (PSLRA), which statements may be identified by words such as “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “expect” and other words of similar meaning. These forward-looking statements involve certain risks and uncertainties. Such risks and uncertainties could cause our actual results to differ materially from those indicated by such forward-looking statements, and include, without limitation: the success, cost and timing of our product development activities and clinical trials; our ability to submit an IND and successfully advance our technology platform to improve the safety and effectiveness of our existing TCR therapeutic candidates; the rate and degree of market acceptance of T-cell therapy generally and of our TCR therapeutic candidates; government regulation and approval, including, but not limited to, the expected regulatory approval timelines for TCR therapeutic candidates; and our ability to protect our proprietary technology and enforce our intellectual property rights; amongst others. For a further description of the risks and uncertainties that could cause our actual results to differ materially from those expressed in these forward-looking statements, as well as risks relating to our business in general, we refer you to our Annual Report on Form 10-Q filed with the Securities and Exchange Commission (SEC) on August 9, 2021 and our other SEC filings.

We urge you to consider these factors carefully in evaluating the forward-looking statements herein and you are cautioned not to place undue reliance on such forward-looking statements, which are qualified in their entirety by this cautionary statement. The forward-looking statements contained in this presentation speak only as of the date the statements were made and we do not undertake any obligation to update such forward-looking statements to reflect subsequent events or circumstances.

We intend that all forward-looking statements be subject to the safe-harbor provisions of the PSLRA.

Our vision and mission

Arming Cells. Against Cancer. For Good.

To transform the lives of people with cancer by designing and delivering cell therapies

5-year core value drivers: our “2-2-5-2” plan

Two
marketed SPEAR T-cell products targeting MAGE-A4

- Synovial sarcoma
- Esophageal and EGJ cancers

Two
additional BLAs for SPEAR T-cell products

- Additional indications for MAGE-A4 targeted products
- ADP-A2AFP

Five
autologous products in the clinic

- HiT
- Next-gen TILs
- New targets
- Broader HLA coverage

Two
allogeneic products entering the clinic

- SPEAR T-cell product targeting MAGE-A4
- HiT mesothelin – partnered with Astellas

Integrated Cell Therapy Capabilities
Research | Preclinical | Translational | Clinical | CMC | Regulatory | Commercial

EGJ: esophagogastric junction cancer; HiT: HLA-independent T-cell receptor (TCR); TIL: tumor infiltrating lymphocyte; CMC: chemistry, manufacturing, and controls

SURPASS is a signal finding trial with our next-generation SPEAR T-cells targeting MAGE-A4

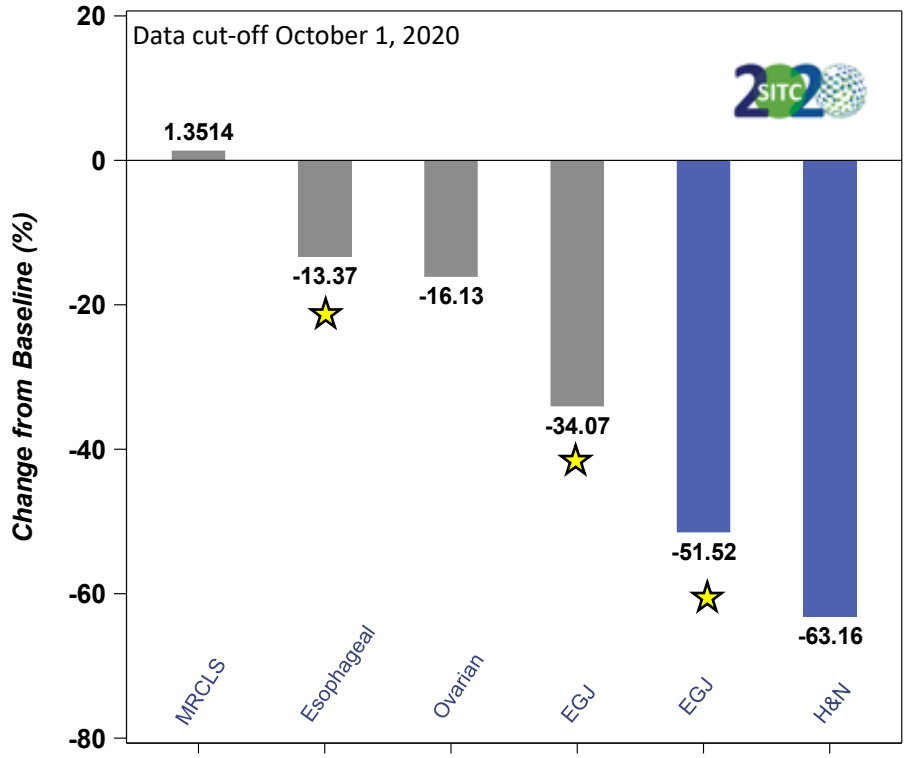
Two marketed SPEAR T-cell products targeting MAGE-A4

- Synovial sarcoma
- Esophageal and EGJ cancers

Two additional BLAs for SPEAR T-cell products

- Additional indications for MAGE-A4 targeted products
- ADP-A2AFP

SURPASS Trial BOR in 6 patients with multiple tumor indications

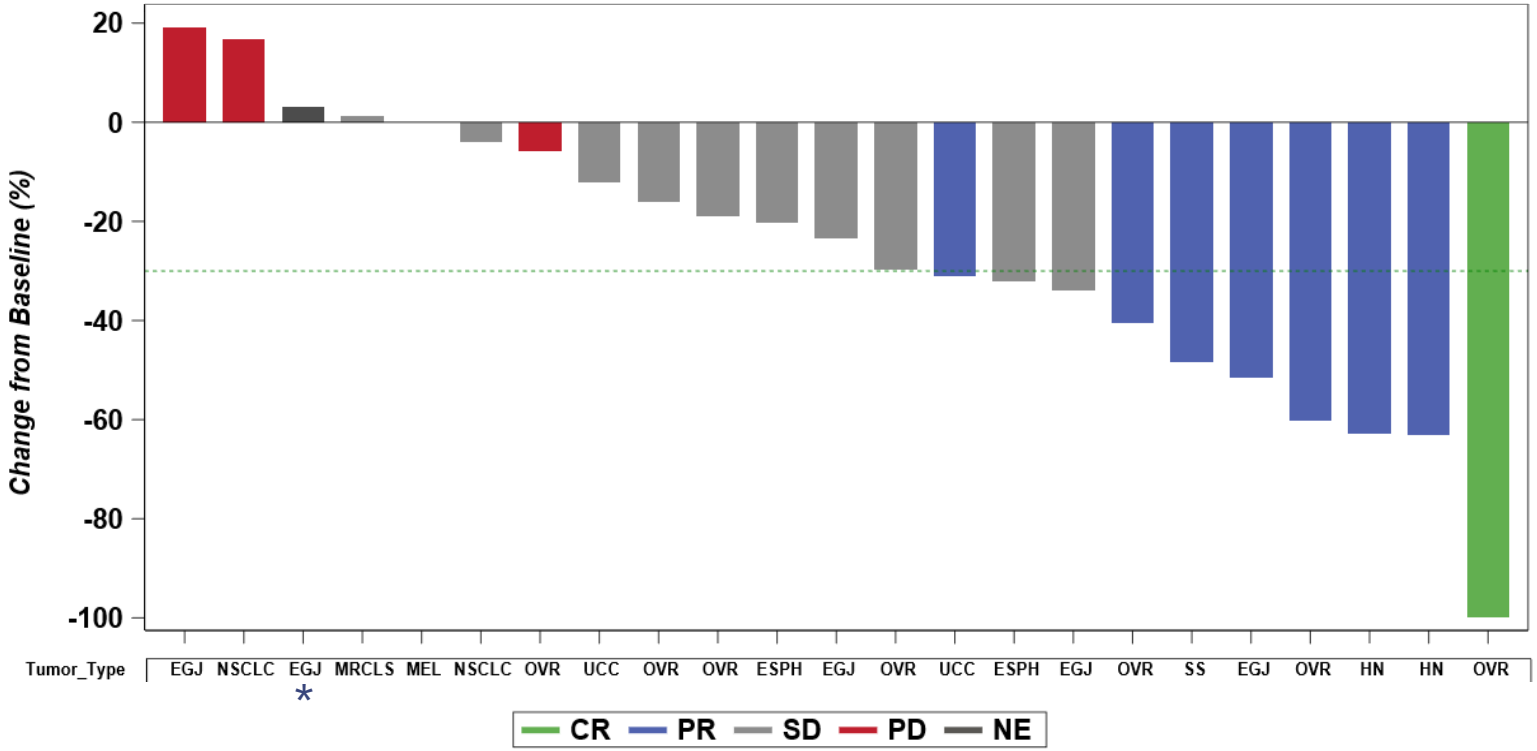


Decision to focus on lung, head and neck, bladder, and gastroesophageal cancers

EGJ: esophagogastric junction cancer; MRCLS: myxoid/round cell liposarcoma; H&N: head and neck cancer
☆ indicates gastroesophageal tumor indications

Responses in 5 solid tumor types including a complete response in ovarian cancer

Initial efficacy is very promising with response rate of 36% (8/22*) and 86% (19/22*) disease control



2021 ESMO congress

Data supports next-gen hypothesis, MAGE-A4 target, and potential of SPEAR T-cells in multiple solid tumor indications for people with cancer

Data represent percent changes from baseline in sum of diameters (sum of the long diameters for non-nodal lesions and short axis for nodal lesions) in target lesions through progression or prior to surgical resection; Reponses evaluated by RECIST v1.1 per investigator assessment; Of 25 patients treated, 3 were not evaluable at the time of data cut-off: 2 patients (ovarian or esophageal cancers) did not have post-baseline scans; 1 patient (EGJ) had a post-baseline scan that did not meet the ≥4 weeks duration for stable disease; CR=complete response; PR=partial response; SD=stable disease; PD=progressive disease; NE=not evaluable; EGJ=esophagogastric junction cancer; NSCLC=non-small cell lung cancer; MRCLS=myxoid/round cell liposarcoma; OVR=ovarian cancer; ESPH=esophageal cancer; UCC=urothelial carcinoma or bladder cancer; SS=synovial sarcoma; HN=head and neck cancer

Data cut-off August 2, 2021; * post-baseline scan for 1 patient (EGJ) did not meet the ≥4 weeks duration for stable disease

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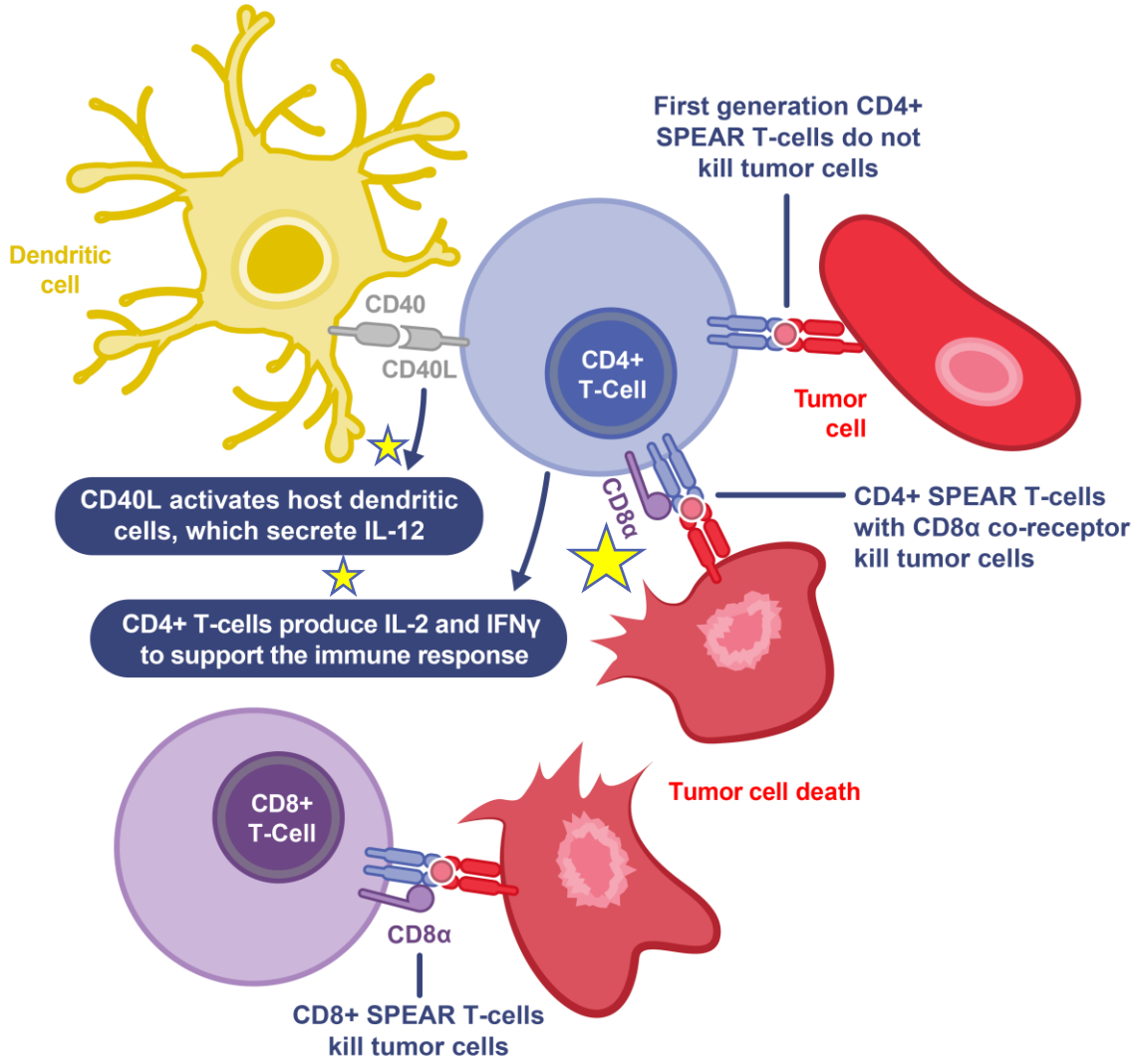
Clinical and translational data substantiates next-gen hypothesis

Designing and delivering better T-cell therapies for people with cancer

- ***Enables helper T-cells to kill tumor cells***
- ***Engages the broader immune system***



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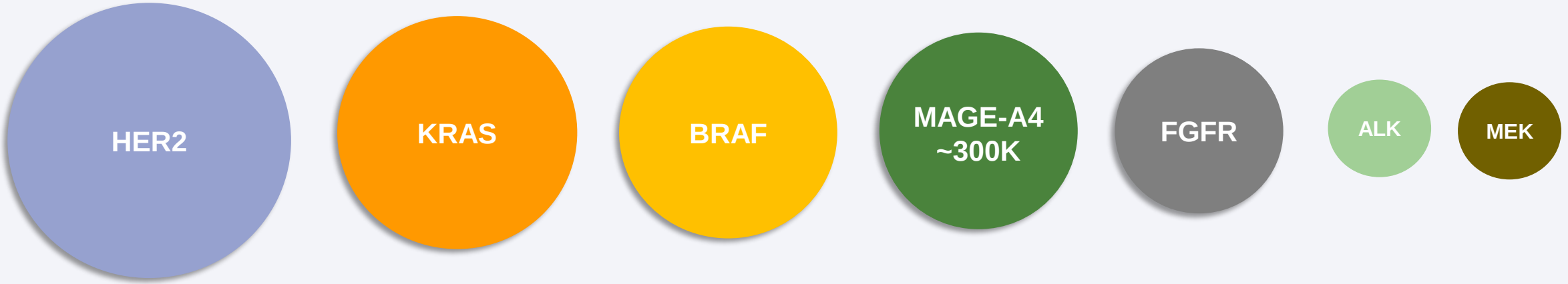
MAGE-A4 is a validated and significant cancer target

Similar opportunity size to BRAF and FGFR

New cases per year in the US and EU



~95K MAGE-A4⁺ deaths per year

Of which ~39K deaths are HLA2+

Illustrative representation of relative population sizes across a sub-set of solid tumors, internal data

Responses in multiple solid tumor indications with ADP-A2M4CD8

Indication	Mortality US and EU*	MAGE-A4 Expression **	Potential MAGE-A4 +ve Patients	Potential MAGE-A4 +ve Patients Factored for HLA***
Synovial sarcoma afami-cel SURPASS	1,804+	67 %	1,209	496
MRCLS afami-cel	2,000	34 %	680	279
Gastroesophageal (esophageal, EGJ, and gastric) SURPASS	101,080	17 %	17,184	7,045
Head and neck afami-cel SURPASS	44,500	18 %	8,010	3,284
Urothelial SURPASS	53,180	33 %	17,549	7,195
NSCLC-Squamous afami-cel	101,661	38 %	38,631	15,839
Melanoma afami-cel	19,750	16 %	3,160	1,296
Ovarian SURPASS	38,840	22 %	8,545	3,503
			Total MAGE-A4: 94,968	**Total MAGE-A4 HLA A2: 38,937**

Significant potential for SPEAR T-cell franchise targeting MAGE-A4

*Mortality figures based on American Cancer Society 2020 (US) and Global Can (EU); +synovial sarcoma and MRCLS figures reflect advanced/refractory treatable patients based on internal primary market research
**MAGE A4 expression based on ADAP samples and expression cut off criteria of ≥30% tumor cells at ≥2+ intensity
***HLA A2 expression of 41% based on ADAP samples (1,043 patient samples)

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SURPASS Phase 1 trial update – ESMO 2021

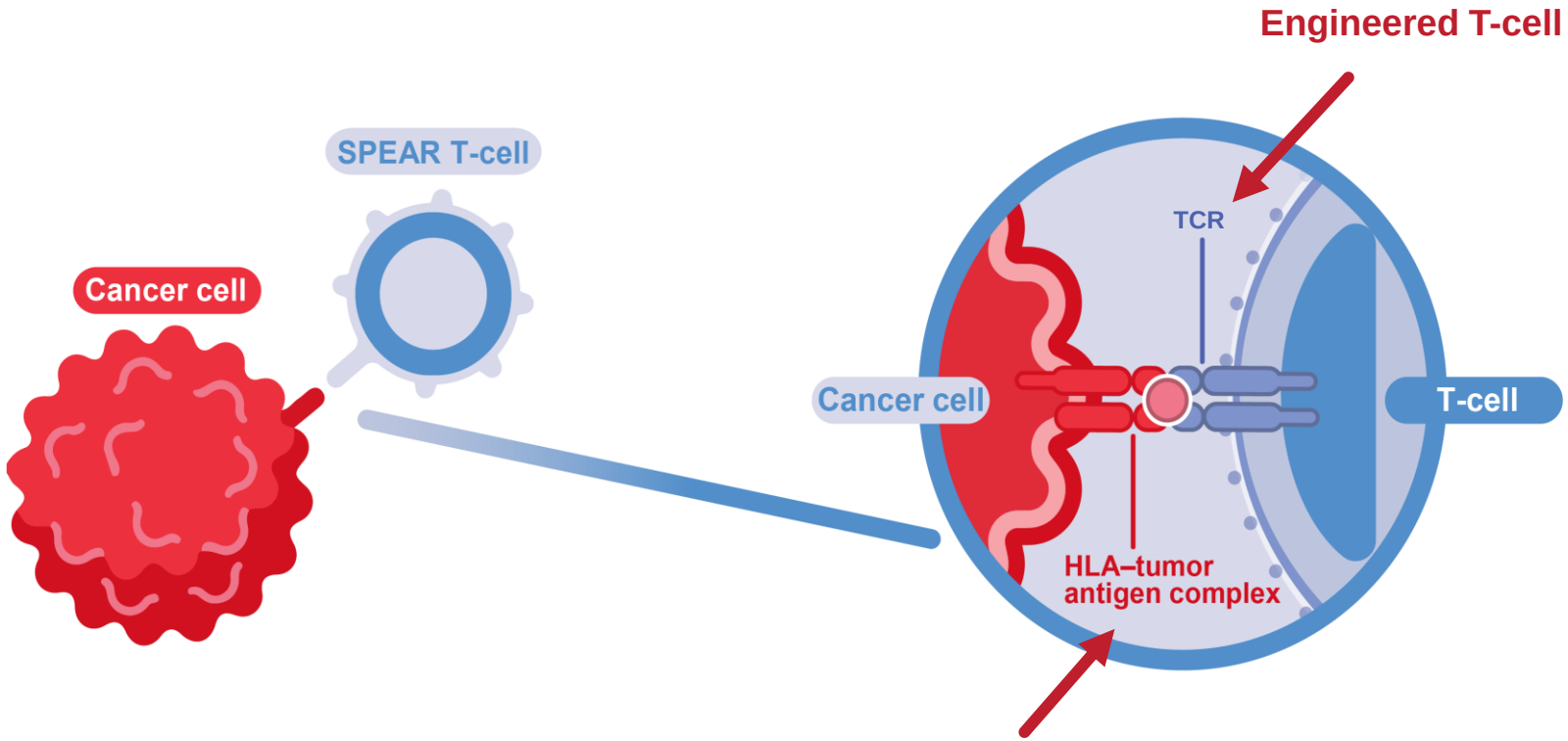
Responses in six solid tumor indications demonstrate power of next-generation SPEAR T-cell therapy

"We are encouraged by these promising early data from the SURPASS trial. Having previously seen strong responses with afami-cel, this next-generation cell therapy appears safe and demonstrated antitumor activity for a majority of patients across many cancer indications."

Dr. David Hong
Principal Investigator, SURPASS trial
Professor, Deputy Chairman in the Department of Investigational Cancer Therapeutics (Phase I Program) at The University of Texas MD Anderson Cancer Center

T-cell receptor (TCR) therapies are critical when addressing solid tumors

Adaptimmune is uniquely positioned to address MAGE-A4 expressing solid tumors



SPEAR T-cell therapies

- Access to targets inside and outside the cancer cell
- Utilize the T-cell native receptor
- Ability to address solid tumors

HLA = human leukocyte antigen; SPEAR = Specific Peptide Enhanced Affinity Receptor; TCR = T-cell receptor

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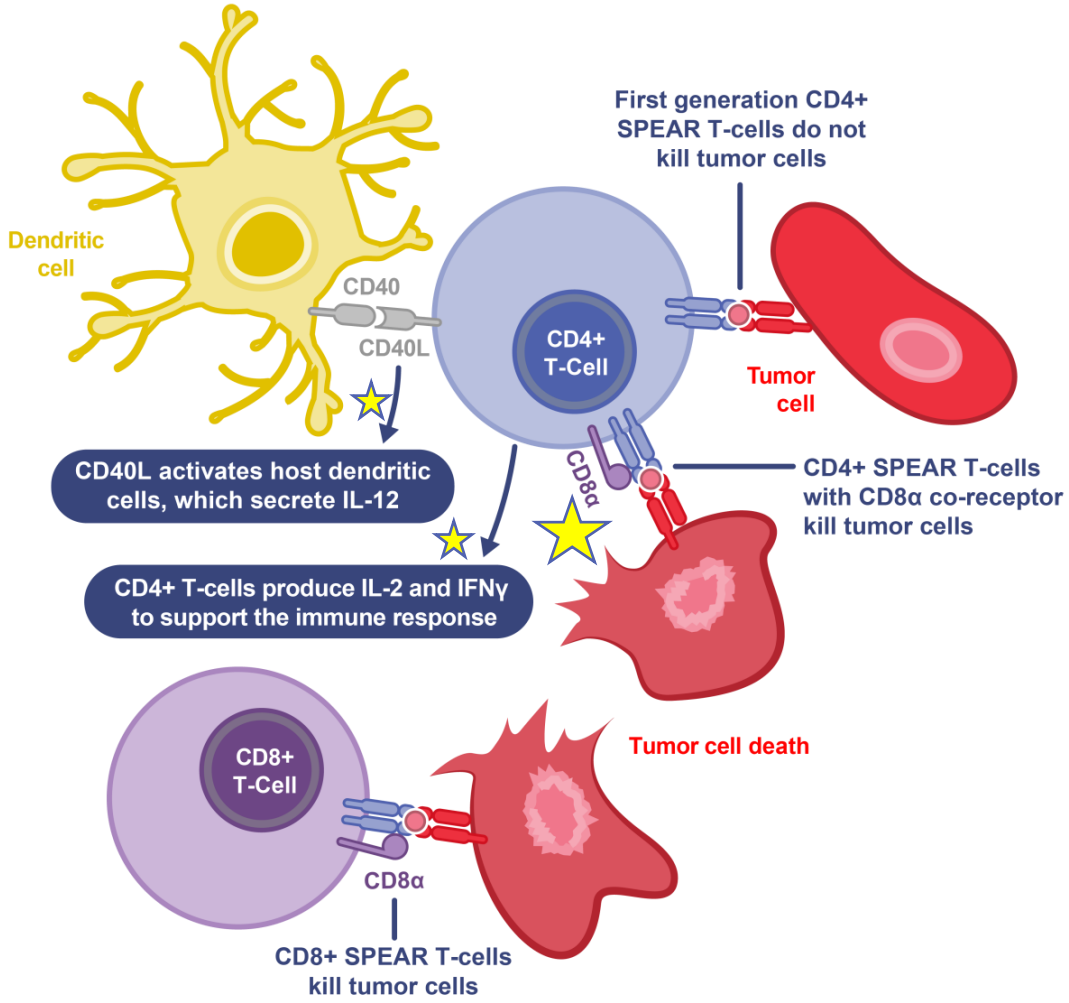
Next-generation T-cell therapy ADP-A2M4CD8 designed to be a more potent product

Addition of CD8α co-receptor alongside MAGE-A4 targeted T-cell receptor intended to increase antitumor immune response

ADP-A2M4CD8 is designed to be a more potent product

ADP-A2M4CD8 expresses the same MAGE-A4 targeted TCR as afami-cel along with a CD8α co-receptor

CD4+ helper T-cells can now kill tumor cells and still provide help to engage the broader immune system to fight cancer



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SURPASS: A Phase 1 trial with a next-generation T-cell therapy in multiple solid tumors

Key eligibility and endpoints

KEY ELIGIBILITY CRITERIA

- Advanced gastric, esophageal, esophagogastric junction (EGJ), bladder, lung, head and neck, and ovarian cancers
- ECOG 0 or 1
- Aged ≥ 18 and < 75 years
- HLA-A*02 positive
- MAGE-A4 expression: ≥ 30% of tumor cells that are ≥ 2+ by immunohistochemistry
- Measurable disease per RECIST v1.1

SAFETY AND TOLERABILITY

- Adverse Events (AEs)
- AEs of Special Interest

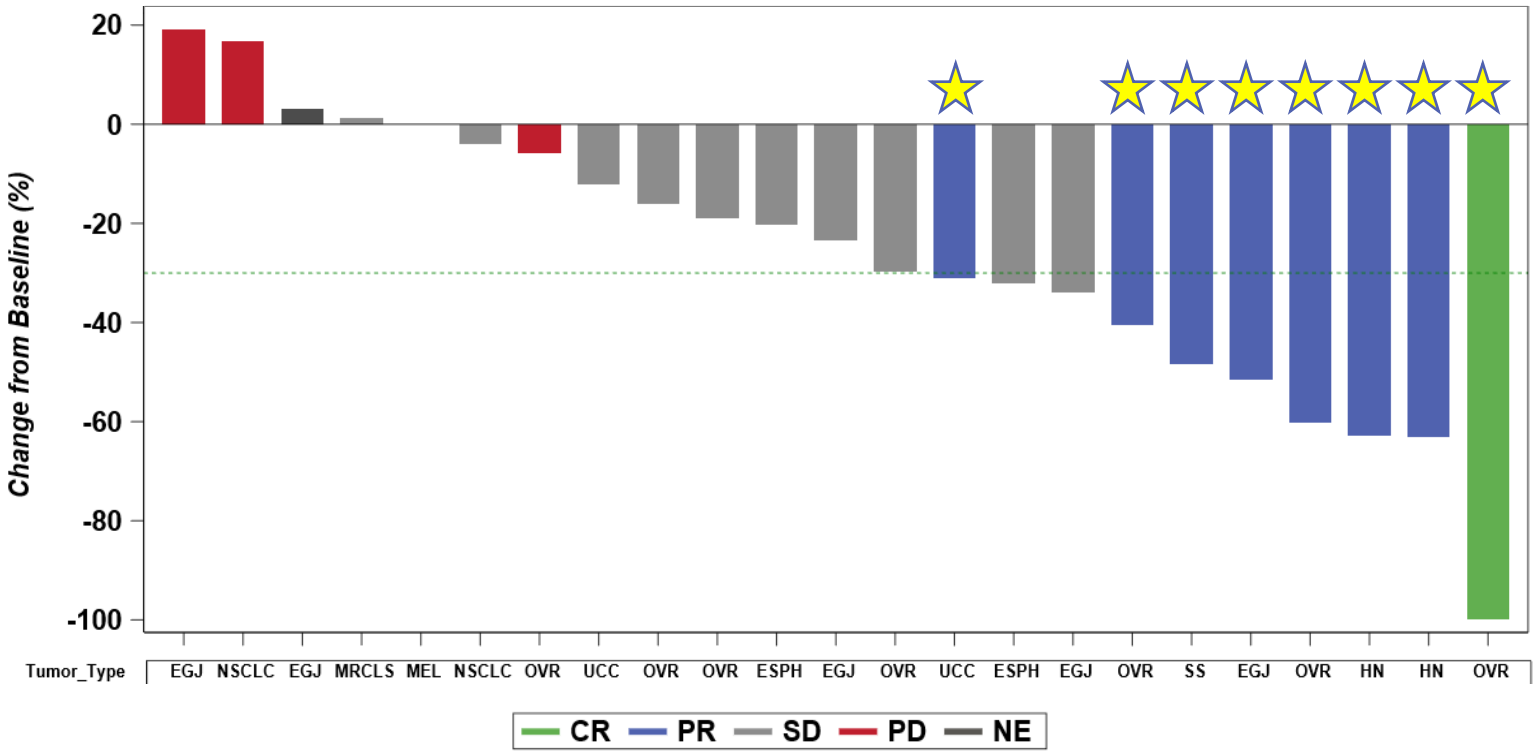
EFFICACY

- Responses per RECIST v1.1
- Duration of response
- Time to response
- Progression-free and overall survival

ECOG = Eastern Cooperative Oncology Group; RECIST =Response Evaluation Criteria in Solid Tumors

Initial efficacy is promising with response rate of 36% (8/22*) and 86% (19/22*) disease control

Best overall response by RECIST v1.1



- Overall response rate of 36% (8/22*) with majority of patients experiencing antitumor activity
- A complete response in a patient with ovarian cancer – and partial responses in ovarian (2), head and neck (2), EGJ, bladder, and synovial sarcoma cancers

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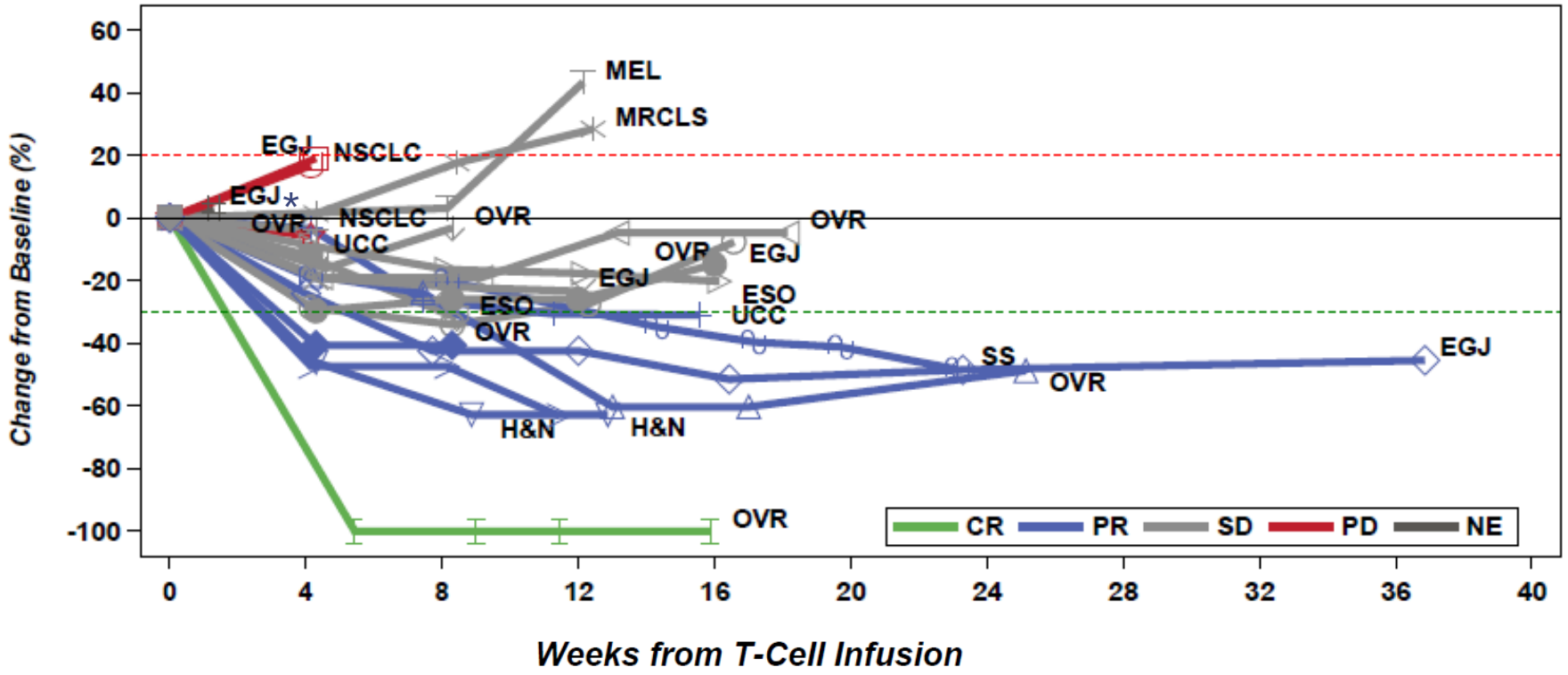
Data cut-off August 2, 2021; * post-baseline scan for 1 patient (EGJ) did not meet the ≥4 weeks duration for stable disease

Initial durability encouraging and will continue to evolve

Several patients receiving clinical benefit for 24 weeks or more post-infusion



- Some patients experience continued reductions in tumors over several months post-infusion
- Median duration of response not reached

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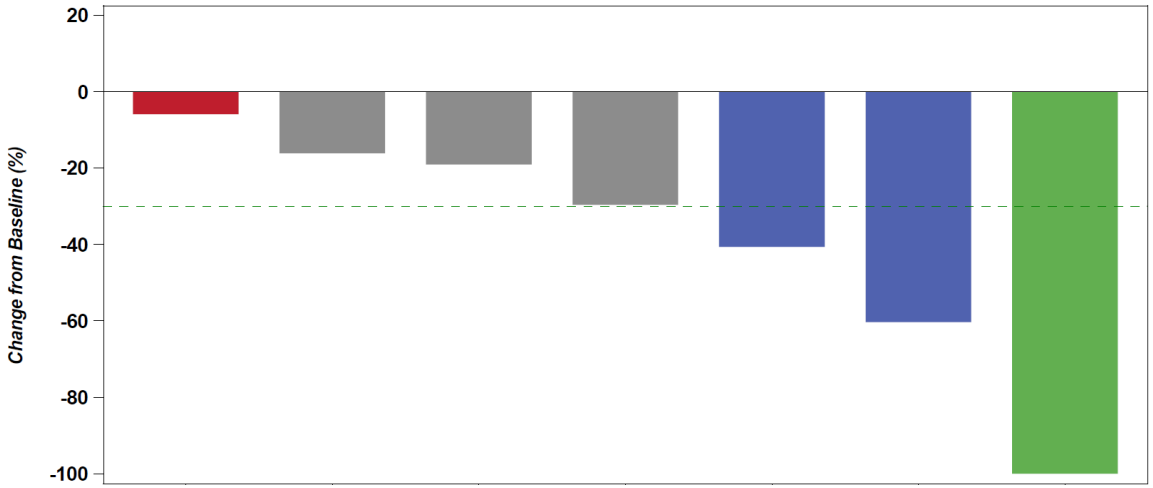
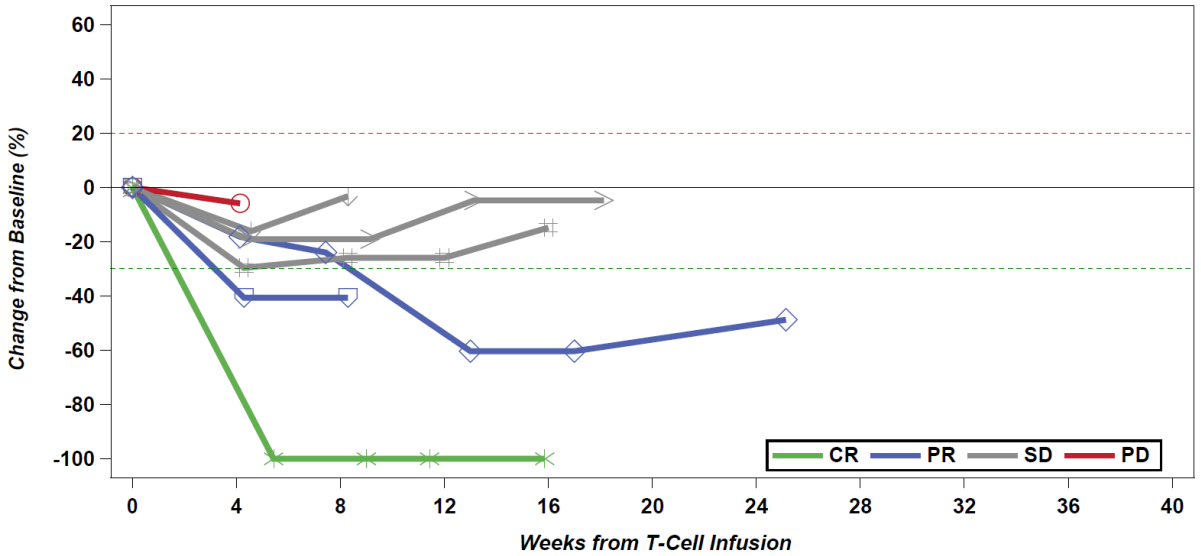
Data cut-off August 2, 2021 * post-baseline scan did not meet the ≥4 weeks duration for stable disease

Reductions in target lesions in all evaluable patients with ovarian cancer

Out of 7 evaluable patients - one complete response, 2 partial responses, and 3 stable diseases

Data from patients with ovarian cancer





CR PR SD PD

Data represent percent changes from baseline in sum of diameters (sum of the long diameters for non-nodal lesions and short axis for nodal lesions) in target lesions through progression or prior to surgical resection; Reponses evaluated by RECIST v1.1 per investigator assessment

SURPASS trial focused on enrolling patients with lung, head and neck, bladder, gastroesophageal, and ovarian cancers

Complete response (CR) ongoing at 6 months in a patient with Grade 3 serous ovarian cancer

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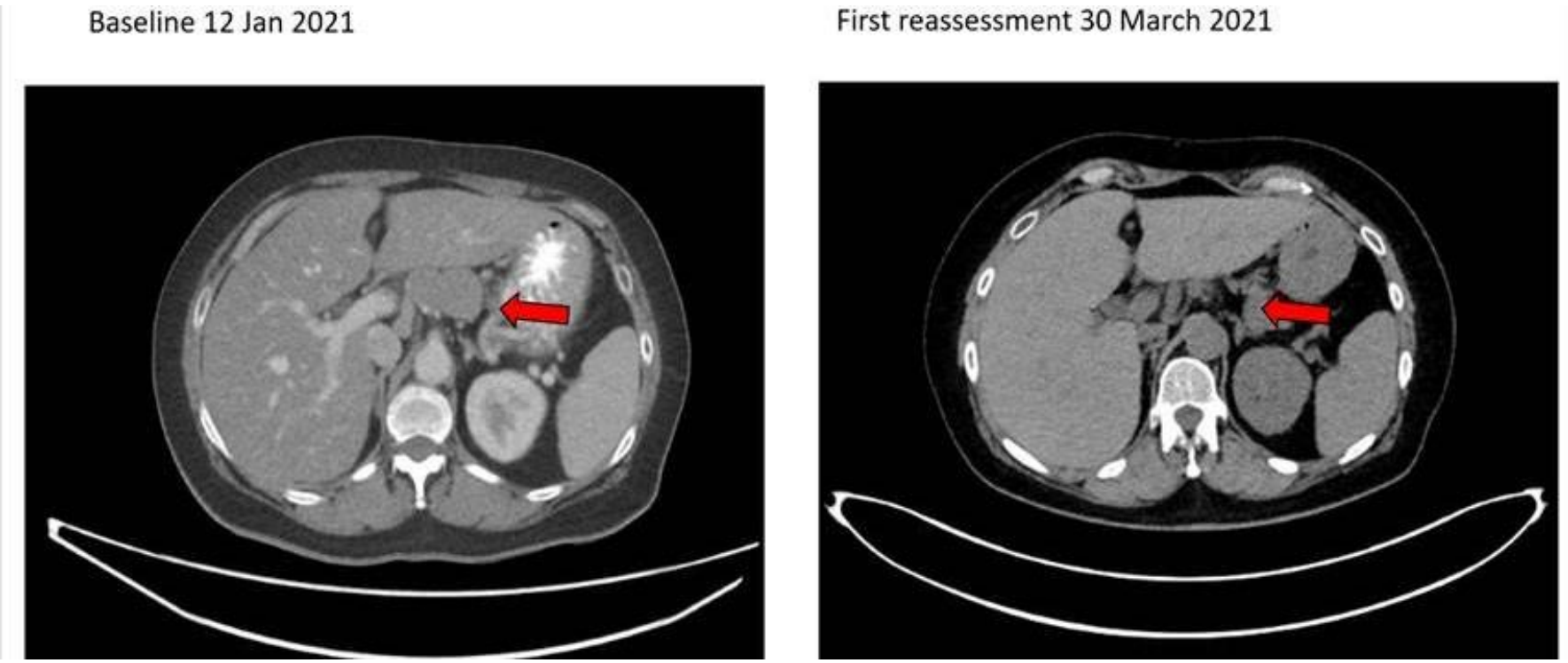

- Platinum resistant* patient treated with 3.24 billion ADP-A2M4CD8 SPEAR T-cells in the Expansion Group
- Adverse events were consistent with those of patients undergoing cytotoxic cancer therapy, with one related SAE (Grade 1, fever) resolved within 1 week

Data cut-off August 2, 2021

*Data on file at Adaptimmune; patients with platinum sensitive disease are excluded per protocol.

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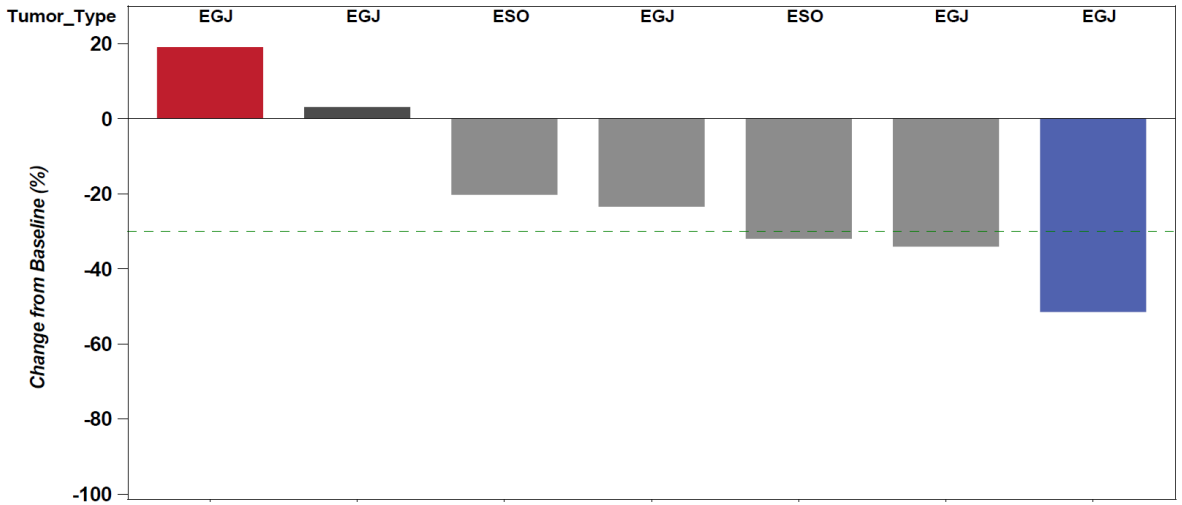
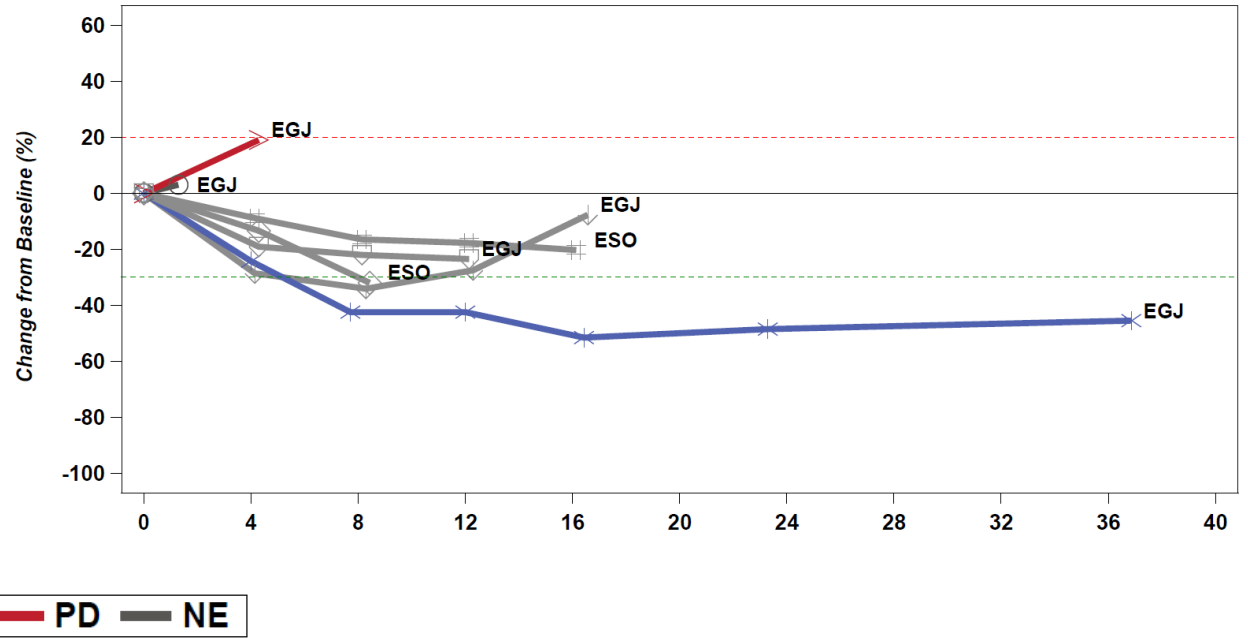
Data in esophageal and EGJ cancers confirm potential of Phase 2 SURPASS-2 trial

Data from patients with esophagogastric junction (EGJ) or esophageal cancers





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Phase 2 SURPASS-2 trial for patients with EGJ or esophageal cancers has initiated

Translational data substantiate increased potency of next-generation ADP-A2M4CD8 product

Analyses comparing first- and next-generation MAGE-A4 targeted T-cell therapy

- Addition of CD8α to next-gen product results in greater tumor cell killing by CD4+ SPEAR T-cells *in vitro*
  - As shown by data from patient manufactured products used in Phase 1 afami-cel trial (first-gen) and the SURPASS trial

- Additional data shows that next-gen ADP-A2M4CD8 engages the broader immune system
  - Post-infusion increases in a subset of the 22 measured serum cytokines
  - Statistically significant increase in serum IL-12 with the next-generation product indicative of dendritic cell engagement (i.e., a broader immune response)

Enables helper T-cells to kill tumor cells

Engages the broader immune system

Safety: acceptable safety profile of next-generation ADP-A2M4CD8 product

Adverse events related to T-cell infusion in ≥ 10% of patients; SAEs in >1 patient

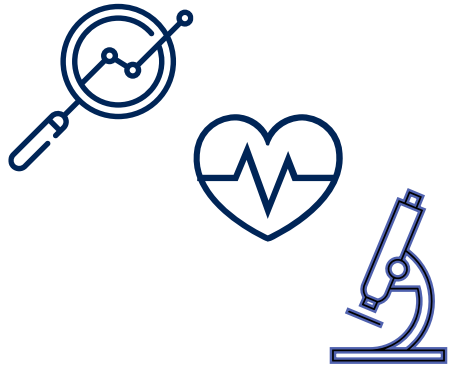
- Most adverse events were consistent with those typically experienced by cancer patients undergoing cytotoxic chemotherapy and/or adoptive cell therapy

- Out of 25 patients treated as of data cut off
  - 18 (72%) experienced CRS of any grade related to the T-cell therapy, with 4 grade ≥ 3 (16%)
  - 4 (16%) experienced immune effector cell-associated neurotoxicity syndrome (ICANS) related to T-cell therapy of any grade with 2 grade ≥ 3 (8%)
  - There were 8 (32%) CRS and 3 (12%) ICANs SAEs related to T-cell therapy
  - One patient experienced a fatal SAE of pancytopenia

To date, safety profile of ADP-A2M4CD8 has been acceptable

Data supports next-gen hypothesis and potential of ADP-A2M4CD8 for people with cancer

- ADP-A2M4D8 is efficacious and generally well-tolerated in heavily pre-treated patients across a broad range of tumor indications
  - Responses in 5 solid tumor indications
    - Overall response rate of 36%
    - A complete response in a patient with ovarian cancer, which remains ongoing
    - Most patients experienced tumor reduction
  - Initial durability data is encouraging
  - To date, safety profile of ADP-A2M4CD8 has been acceptable



- Data demonstrate that ADP-A2M4CD8 does what it was designed to do
  - Produce a more potent antitumor response and better CD4 helper function

- SURPASS trial is enrolling eligible patients with gastroesophageal, head and neck, lung, bladder, and ovarian cancers

- Phase 2 SURPASS-2 trial has initiated for people with esophageal and EGJ cancers

Poster available on September 16, 2021 on ESMO website

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