Years 1–15
Day 1 to PD
• Next-generation SPEAR T-cells (ADP-A2M4CD8) target MAGE-A4+ tumors

Figure 2.

• Engineered CD8α co-receptor increases the potency of CD4 (in the context of HLA-A*02 (Figure 3)

SURPASS Trial Design:
A Phase 1 Dose Escalation Trial to Assess Safety and Efficacy of ADP-A2M4CD8 in HLA-A2+ Patients with MAGE-A4+ Tumors

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Background
• Next-generation SPEAR T-cells (ADP-A2M4CD8) target MAGE-A4+ tumors in the context of HLA-A*02 (Figure 1)
• Engineered CD8α co-receptor increases the potency of CD4+ T-cell pre-clinical anti-tumor response (Central figure)

Figure 1. SPEAR T-cells

Tumor cell targeting and killing
Enhanced engagement of the immune system
Treatment effect duration

SURPASS trial (NCT04044859)
• Recruiting up to 30 patients from North America and Europe
• Multiple solid tumor types; HLA-A*02 and MAGE-A4 positive

Figure 2. SURPASS trial design

Figure 3. Patient cell journey

Trial Details
• This is a first-in-human, dose-escalation, open-label trial
• We are currently recruiting trial participants
• Study design and engineered T-cell pathway are shown below (Figure 3 and Figure 4)

Figure 4.

Improve targeting and killing of solid tumor cells
• Effectiveness demonstrated with first-generation engineered TCRs
• Now innovating to find ways of strengthening anti-tumor TCR responses

Figure 3. SURPASS T-cell Infusion

First-generation SPEAR T-cell

Next-generation SPEAR T-cell

Abbreviations
Abbreviations: DC, dendritic cell; HLA, human leukocyte antigen; MAGE-A4, melanoma-associated antigen-A4; PD, progressive disease; RECIST, response evaluation criteria in solid tumors; SPEAR, specific peptide enhanced affinity receptor; TCR, T-cell receptor

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