DPX-Survivac, a novel T cell immunotherapy, induces robust T cell responses in advanced ovarian cancer with significant anti-tumor efficacy

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ABSTRACT

Long-term clinical response in subjects with recurrent ovarian cancer

Conclusions:
- DPX platform is a unique delivery system that allows the active uptake of peptides and presentation to naive T cells to generate antigen-specific T cell responses.
- DPX-Survivac generates robust, functional, targeted, and sustained survivin-specific T cell responses in ovarian cancer subjects in the maintenance setting as well as with recurrent disease.
- DPX-Survivac induction of cytolytic T cell pathway is correlated with clinical response highlighting its unique mechanism of action.
- DPX-Survivac mechanism of action has been confirmed across multiple clinical trials and has shown to provide clinical benefit and long-term clinical response in some subjects with advanced recurrent ovarian cancer.

Further Information

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References:

Clinical anti-tumor responses in subjects with recurrent ovarian cancer correlate with DPX-Survivac induced T cell infiltration

Figure 1: Longitudinal IFN-γ ELISPOT responses in a patient with recurrent ovarian cancer. Survivin-specific clones within tumor T cell population were analyzed by TCR repertoire sequencing analyses for DPX-Survivac treated patients and controls. (A) Longitudinal IFN-γ ELISPOT responses and (B) Case Study showing clinical anti-tumor responses in subjects with recurrent ovarian cancer.

Methods

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For the eligible subjects enrolled across different studies, whole blood (PBMCs) was collected prior to subjecting to comprehensive histopathology (expression of survivin and other key immune markers) and subsequent dose of DPX-Survivac + CPA as assessed by IFN-γ ELISPOT assay. Data are expressed as mean Spot Forming Units (SFUs) per million cells from all evaluable subjects (at least 2 time-points post on-treatment). Two patients exhibited a partial clinical response at 7 months after the first dose of DPX-Survivac. A third patient, who was treated with DPX-Survivac, showed a 3-month clinical benefit. Overall, the treatment was well tolerated and the majority of patients had no grade 3 or 4 adverse events. The study was conducted in accordance with the Declaration of Helsinki and approved by the institutional review board. Further information about the study can be found at ClinicalTrials.gov (NCT02785250, NCT01416038, NCT03332576).