Clinical activity of SD-101 with immune checkpoint inhibition (ICI) in metastatic uveal melanoma liver metastasis (MUM-LM) from the PERIO-01 Phase 1 trial

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Summary

Regional delivery of SD-101 by PEDI results in high drug levels within the liver and transient serum exposure

Median PFS of 11.7 months in patients receiving 2 mg + nivolumab (median OS not reached)

Increased CD8+ T cell, NK cell and M1 macrophage infiltration in the tumors

Decreased immunosuppressive Tregs, M-MDSCs and macrophages in liver metastases

Gene expression analysis in LM and in PBMCs revealed increased signals related to CD8+ cytotoxic T lymphocyte activity, Th1 activation, cytokine and chemokine signaling

Systemic immune activation observed by an increase in pro-inflammatory cytokines

Systemic increase in NK cell proliferation and CD8+ T cell activation

Conclusions

Delivery of SD-101 by PEDI plus systemic ICI in MUM-LM patients results in clinical activity with median PFS of 11.7 months, ctDNA molecular responses, MDSC re-programming, and evidence of peripheral and intra-tumoral immune activation.

Results

Figure 2. PEDI of SD-101 via HAL reduced ctDNA

Figure 3. Kaplan–Meier curves showing overall survival for patients in different Cohorts (A) and in Cohort B (B).

Figure 4. Plots showing the decrease in ctDNA levels after treatment in Cohort B (A) and in Cohort B (B).

Figure 5. Sequential MRI/CT scans

Figure 6. Multiplex immunofluorescence images of immune cell infiltration in baseline and Day 57 LM. CD4+ and CD8+ T cell infiltration in LM from patients 111-025 (top panel) and 102-023 (bottom panel) (A). CD163+ and CD68+ M-MDSCs (B). CD8+ T (C).

Figure 7. Gene expression patterns in tumors and in circulation associated with tumor regression

Figure 8. Pathway scoring determined by advanced analysis of NanoString gene expression data at baseline and Day 57 for LM (A) and Day 36 for PBMCs (B).