**BACKGROUND: CDX-301**

- Dendritic cells (DCs) are often rare or completely missing from tumors and are necessary for anti-tumor immunity.
- CDX-301 is the soluble recombinant human protein form of the Fms-related tyrosine kinase-3 ligand (Flt3L), a hematopoietic cytokine.
- Flt3 receptor (CD135) is expressed on hematopoietic stem cells, early progenitor cells, immature thymocytes, and steady state dendritic cells.
- CDX-301 has shown an ability to increase the number of DC precursors and DCs in blood and tissue, including the C571B10DC74 (pDC) subset in humans and the corresponding CD103+ cDC1 subset in mice.
- In humans and mice, the intratumoral CD141+CD103+ DCs are important for antigen cross-presentation to T cells and correlate with improved outcomes for multiple tumor types.

**BACKGROUND: AST-008**

- TLR9 agonist SNAs induce Th1-type cytokine production, cytokine release by DCs and promotion of adaptive immunity. In addition, other therapies can be combined with SNAs to enhance the cancer therapy.
- Synergistic effect of TLR9 agonist SNAs with other anti-cancer agents is an active area of investigation.

**CONCLUSIONS**

- Treatment with CDX-301 and muAST-008 showed an additive effect in retarding tumor growth and prolonging survival.
- We observed a significant increase in the percentage of splenic CD103+cDCs from the addition of muAST-008 to CDX-301 treatment.

- In addition, muAST-008 led to the up-regulation of activation markers on dendritic cells, which was markedly enhanced when combined with an agonist CD40 antibody.

- These data demonstrate that muAST-008 leads to systemic activation of CDX-301 expanded DCs, leading to more potent anti-tumor immunity and support the potential of combining CDX-301 and AST-008 in augmenting the immunotherapies of cancers.