**Introduction**

- Baseline and other chemotherapeutic agents are currently used for myeloablative conditioning prior to autologous hematopoietic stem cell transplantation (HCT).
- Baseline is burdensome with associated morbidities (e.g., loss of preserved fertility) in non-specified and non-hematologic disease indications.
- To overcome the current need, we are developing Epitope-directed AutoLOGous Engraftment Strategy (ESCAPE), a novel strategy for selectively depleting WT, disease does not preserve fertility) and is non-potentially lethal, and releases HSCs for use in vivo.

**Successful high efficiency multiplex editing in human HSPCs**

**ESCAPE editing preserves WT CD117 receptor function in vitro**

**ESCAPE HSPCs retain normal myeloid and erythroid differentiation in vitro**

**CD117 epitope engineering prevents anti-CD117 mab binding**

**mAb7 treatment induced HSPC apoptosis in vitro**

**Disclosures**

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