CB-010: anti-CD19 allogeneic CART cell therapy

**Conventional**

- CD19 CAR-T cells
- Tumors of B cell malignancy
- Tumor antigen: CD19
- Healthy donor leukapheresis
- CD19 expression on tumor cells
- Conventional allogeneic CAR

**CB-010**

- CD19 CAR-T cells
- Tumors of B cell malignancy
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- CD19 expression on tumor cells
- CB-010

**Key attributes**

- CB-010 PD-1 KO for enhanced persistence of antitumor activity
- CB-010 Potentially better tumor killing ability
- Reduced off-target editing and genetic rearrangements
- CB-010 tumor antigen: CD19

**CB-010: PD-1 KO designed to reduce CART-cell exhaustion**

- Conventional allogeneic CAR therapy
- PD-1 ligand binds to cancer cells
- Limiting the CART cells’ killing ability.

**CB-010 CART therapy**

- CB-010 cells lack PD-1 receptors on their surface
- CB-010 cells are designed to maintain high antitumor activity for a longer duration

**Baseline and disease characteristics**

- Aggressively, with PD1 ligands
- Patients enrolled in CB-010 CART

**Treatment emergent adverse events (TEAEs)**

- Median days to onset: 8

**CB-010 maintains persistent tumor eradication longer than conventional allogeneic CART cells**

- In preclinical studies, a single dose of CB-010 resulted in profound tumor regression of metastatic CD19+ tumor xenografts and led to a significantly more durable antitumor response vs conventional CD19-specific allogeneic CART (expressing PD-1)

**Kinetics of CB-010 (N=6)**

- Central tumor analysis
- Tumors were established by IV engraftment for 23 days (Day 0-1)
- CB-010 was generally well tolerated
- No Grade 4 or 5 AE

**CB-010 ANTLER Phase 1 trial design**

- **Patients with aggressive disease**
  - 5/8 (62.5%) patients with CD19+ lymphoma
  - 2/13 (15%) patients with CD19+ acute leukemias

- **Exclusion criteria**
  - Prior CD19-targeted therapy
  - Recurrent or refractory disease
  - CD19 negative disease

**CB-010: preliminary efficacy**

- **AEs of special interest**
  - Chimeric antigen receptor T exhaustion
  - Cytokine release syndrome (CRS)
  - Lactate dehydrogenase (LDH)
  - Thrombocytopenia/platelet count

**Conclusions**

- **In ANTLER Phase 1 study**, CB-010, an allogeneic CD19-directed CART cell therapy with a PD-1 KO, demonstrated promising preliminary safety and efficacy in patients with r/r B-NHL at dose level 1

- **CB-010 was generally well tolerated**
  - 1/8 (12.5%) patients with CD19+ lymphoma and acute leukemias
  - No Grade 4 or 5 AE

- **At the initial dose level of 40x10^6 CART-T cells**, best response of 100% CR rate (6/6) with 6-month CR rate of 60% (2/3) was observed by investigator as well as independent radiologist assessment

- **Enrolling patients at dose level 2 of 80x10^6 CART-T cells**