Durable complete response achieved in a relapsed/refractory diffuse large B cell lymphoma (DLBCL) patient treated with a CRISPR-edited allogeneic anti-CD19 CART cell therapy with a PD-1 knockout: Case report from the CB-010 ANTLER trial

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Objectives: tumor response, RP2D

Exclusion: prior CD19

Eligibility: 2

CD19 CAR site

- Fludarabine followed by

CD19 CAR site

Best response: CR

DLBCL confirmed CD19+

DLBCL confirmed per local pathology report, CR: complete response, CT: computed tomography, PET: positron emission tomography

Patient case presentation

Patient demographics

<table>
<thead>
<tr>
<th>Age</th>
<th>Sex</th>
<th>Race</th>
<th>Ethnicity</th>
<th>Diversity</th>
<th>Height</th>
<th>Weight</th>
<th>BMI</th>
<th>BSA</th>
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</thead>
<tbody>
<tr>
<td>68</td>
<td>M</td>
<td>Not reported</td>
<td>Hispanic or Latino</td>
<td>Height</td>
<td>172.7 cm</td>
<td>129.5 kg</td>
<td>43.4 kg/m²</td>
<td>2.49 ft</td>
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CB-010 CAR construct uses an anti-CD19 scFv PMC63 with a 6-188 codon substitute domain

CAR: chimeric antigen receptor; KO: knockout; CD: cluster of differentiation; chRDNA: CRISPR hybrid RNA

CB-010 has a generally well-tolerated safety profile

No GvHD, CRS, ICANS, prolonged cytopenias or infections observed in this patient

Sensitivity course by 6 month 1 by Day 28

As previously reported, patients enrolled in the dose escalation portion of the ANTLER trial achieved a 94% ORR, 69% CR rate

CB-010 ANTLER Phase 1 trial summary

- CB-010 is the first allogeneic CD19-directed CART cell therapy in the clinic with a PD-1 knockout, a genome editing strategy designed to enhance antitumor activity by limiting premature CART cell exhaustion

- As previously reported, patients enrolled in the dose escalation portion of the ANTLER trial achieved a 94% ORR, 69% CR rate and a 48% CR rate at 6 months and CB-010 demonstrated an generally well tolerated safety profile (N=14)

- Durable CRs observed with the longest ongoing CR through month 24

- CRs observed in 3 patients like

- This case report, a heavily pretreated DLBCL patient received CB-010 (40 ± 10 CART cells) and no GvHD, CRS, ICANS, prolonged cytopenias, or infections were observed with ongoing CR through month 21

- Enrollment of 2L LBCL patients is ongoing in dose expansion

CB-010 was granted Regenerative Medicine Advanced Therapy (RMAT), Fast Track, and Orphan Drug designations by the FDA in 2022