

## **CNS** CASE STUDY

### Case 2:

Innovative Management of Diffuse Midline Glioma, H3K27-altered, CNS WHO Grade 4 with GD2-targeting CAR T Therapy

#### PATIENT PROFILE

- Age/Gender: 22-year-old Male
- Diagnosis: Diffuse Midline Glioma, H3K27-altered, CNS WHO Grade 4
- Initial Presentation:
   Symptoms necessitating
   VP shunt placement for intracranial pressure relief

# CLINICAL HISTORY AND PREVIOUS TREATMENT:

**March 2023:** VP shunt placed, followed by craniotomy and biopsy confirming Diffuse Midline Glioma, H3K27-altered, CNS WHO Grade 4.

**Feb-May 2023:** IMRT Radiation and Concurrent Temozolomide administered.

Initiation of ONC 201 therapy

**First Progression (April 2024):** Imaging revealed disease progression.

Proton Therapy administered (April-June 2024) with concurrent chemotherapy.

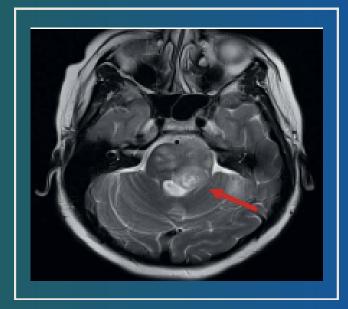
**Second Progression:** Bevacizumab added to manage symptoms and tumor-related edema.

### CURRENT TREATMENT REGIMEN

GD2-targeting CAR T Therapy initiated following second progression.

Mode of Delivery: Systemic

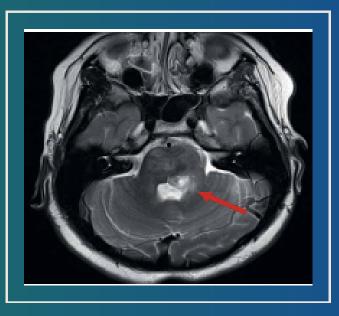
## **Baseline**



# IMAGING FINDINGS Pre-CAR T Therapy (Left Image):

- Shows a well-defined, hyperintense lesion in the brainstem region, consistent with Diffuse Midline Glioma.
- Surrounding edema is noted, contributing to mass effect on adjacent structures.
- Tumor exhibits irregular borders with central necrosis.

## 2nd month



### IMAGING FINDINGS

# Post-CAR T Therapy (Right Image):

- Massive reduction in tumor size and surrounding edema.
- Central necrosis appears appears more prominent, indicating a treatment response.

"These findings suggest a partial response to GD2targeting CAR T therapy, warranting ongoing evaluation and follow-up imaging."

## CONCLUSION

GD2-targeting CAR T therapy presents a novel therapeutic avenue for patients with recurrent Diffuse Midline Glioma, H3K27-altered, who have exhausted conventional treatment options.

