ABSTRACT #1223: EO2401 (EO) therapeutic vaccine for patients (pts) with recurrent glioblastoma (GB) Phase 1/2 ROSALIE study
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BACKGROUND
Recurrent glioblastoma (GB) has a poor prognosis and a limited number of treatment options, with an expected median survival around 2–12 months. Many novel strategies are being explored for recurrent GB.

EO2401 is composed of three high-affinity mAb-derived dendritic cell/professional human antigen-presenting cells (DC-PHPAPP)-derived peptides targeting CD8 T-cell HLA-A2 epitopes from tumor antigens up to GB (e.g., EGFRVIII, ERBB2, and the hetero-dimer CEA/PD-L1). Nivolumab supports T cell expansion and infiltration of tumors. Bevacizumab has an anti-angiogenic property and can counteract immune-suppression by VEGF.

EO2401 was tested in a phase 1/2 study (EOGBM1-18, NCT04116658) investigating EO2401 (300 µg/peptide, every 2 weeks), and later the same study investigating the combination with nivolumab and bevacizumab (EN, ENB).

METHODS
EO2401 (administered SC with adjuvant Montanide ISA 51 VG) and nivolumab +/- bevacizumab is well tolerated with a safety profile consistent with the profile of nivolumab, and when applicable the profile of bevacizumab, except the addition of local administration site events in 45% of patients; median time to event onset 38 days (range 14–100). Most common AEs, irrespective of relationship, were fatigue (27.6%), headache (27.6%), injection site reaction (17.1%), hemiparesis (0.9%). Immune monitoring in EO2401/nivolumab generated strong systemic immune responses correlating with efficacy.

CONCLUSIONS
EO2401/nivolumab +/- bevacizumab was well tolerated with a safety profile consistent with the individual agents. EO2401/nivolumab showed clinical activity in GB, except the addition of local administration site events. EO2401/nivolumab generated strong systemic immune responses correlating with efficacy. Additional standard of best available to patient with GB. The combination of EO2401/nivolumab/b (EO) has a high potential for the treatment of GB.

REFERENCES

SAFETY (pre-planned analysis clinical cut-off 2022-06-23, n=76)
EO2401/nivolumab was well tolerated with a safety profile consistent with the individual agents, except the addition of local administration site events.

Grade 3 events, irrespective of relationship, were seen in 35% of patients, and related Grade 4 events in 17% of patients.

Any local administration site events were fatigue (0.5%), dizziness (0.5%), headache (0.5%), injection site reaction (0.3%), hemiparesis (0.3%), and aphasia (0.3%).

Five AEs leading to treatment discontinuation (transient M. 1 pt), afebrile meningitis, newly diagnosed CNC, alteration general status, Pts who received the entire planned therapy (Cohort 1a) and treated sequentially before Part 2/C2a.

EO2401/nivolumab generated strong systemic immune responses correlating with efficacy.

CLINICAL OUTCOME

Part 1+2/Cohorts 2a ORR/DCR & Progression-free survival (Part 1/C2a vs Part 2/C2a)

Part 1+2/Cohorts 2a ORR/DCR & Progression-free survival (Part 1/C2a vs Part 2/C2a)

Part 1+2/Cohorts 2a ORR/DCR & Progression-free survival (Part 1/C2a vs Part 2/C2a)

Part 1+2/Cohorts 2a ORR/DCR & Progression-free survival (Part 1/C2a vs Part 2/C2a)

Part 1+2/Cohorts 2a ORR/DCR & Progression-free survival (Part 1/C2a vs Part 2/C2a)

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Part 1+2/Cohorts 2a ORR/DCR & Progression-free survival (Part 1/C2a vs Part 2/C2a)