LUMINOS-101: Phase 2 Study of Lerapolturev with Pembrolizumab in Recurrent Glioblastoma

Principle Investigators
Prakash Ambady, MD[1]; Kevin P. Becker[2], MD, PhD; Nicholas Butowski, MD[3]; Robert Cavaliere, MD[4]; William Curry, MD[5]; Daniel Landi, MD[6]; Shirley Ong, MD[7]; Andrew Sloan, MD[8]; Rafael A. Vega, MD[9], PhD; Patrick Wen, MD[10]

Participating Study Centers (USA)
[1]Oregon Health & Science University, Portland, OR; [2]UConn Health, Farmington, CT; [3]Department of Neurological Surgery, University of California, San Francisco, CA; [4]Baptist MD Anderson Cancer Center, Jacksonville, FL; [5]Mass General Cancer Center, Harvard Medical School, Boston, MA; [6]Duke University Medical Center, Preston Robert Tisch Brain Tumor Center, Durham, NC; [7]The Ohio State University Wexner Medical Center, Columbus, OH; [8]Department of Neurosurgery, University Hospitals Cleveland Medical Center & Seidman Cancer Center, Columbus, OH; [9]Beth Israel Deaconess Medical Center, Boston, MA; [10]Dana-Farber Cancer Institute, Boston, MA

Trial Registration Number: NCT04479241
Start Date: October 21, 2020
Estimated Completion Date: March 2023

Objectives

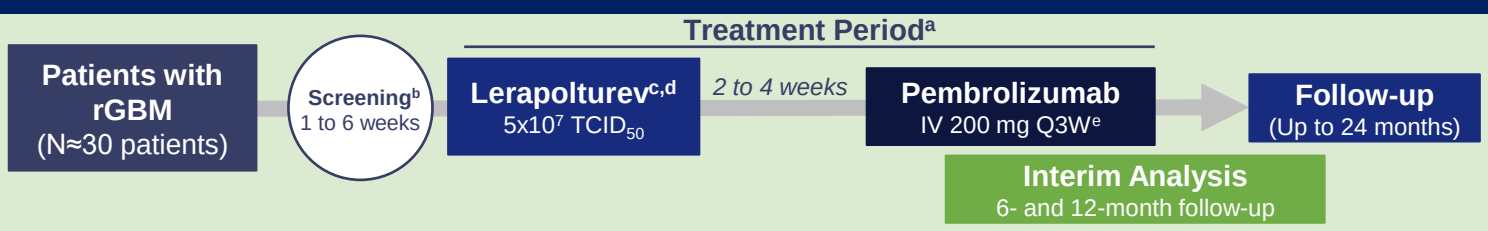
Primary objectives:
- Evaluate anti-tumor activity
- Evaluate safety and tolerability

Secondary objective:
- Evaluate survival and disease control outcomes

Key Eligibility Criteria

- ≥18 Age ≥18 years
- ≥70 Baseline KPS ≥70
- Patients with confirmed rGBM with enhancing lesions ≥1 to ≤5.5 cm in diameter in all planes
- Underwent prior vaccination against PV and received a boost immunization with trivalent IPOL® prior to lerapolturev administration
- No multifocal disease, serious cerebral herniation syndrome, or extensive leptomeningeal, subependymal, or ≥1 cm enhancing disease crossing the midline
- No previous discontinuation of any anti-PD-1/ PD-L1 therapy due to toxicities, and no severe active comorbidities
- No intratumoral, systemic, or immunosuppressive therapy within 12 weeks prior to day 0, and no high-dose systemic corticosteroids within 2 weeks of lerapolturev infusion

LUMINOS-101 Study Design



[a]Bevacizumab (7.5 mg/kg Q3W) and/or dexamethasone (≤4 mg/day) for symptom control related to PTE, as needed. [b]Patients receive IPOL® anti-PV booster vaccination. [c]Lerapolturev intratumoral administration of 5x10^7 $TCID_{50}$ via CED. [d]Lerapolturev retreatment if cPD ≥12 months from prior infusion. [e]For up to 24 months, permanent discontinuation for toxicity or cPD.

Study Endpoints

Primary endpoints:
- **Efficacy:** ORR, DOR, DRR
- **Safety:** TEAEs via CTCAE

Secondary endpoints:
- **Efficacy:** PFS (via alternative response criteria), DCR, duration of disease control, landmark and overall survival
- **Safety:** Any cause TEAEs via CTCAE

Exploratory endpoints:
- Biomarkers associated with lerapolturev activity or that may predict response
- Radiographic response via alternative response criteria

Radiographic response via iRANO criteria, unless otherwise noted

Schedule of Events & Assessments

Day 0 or 1:	Lerapolturev infusion*
Day 14 to 28 up to month 24:	Initiate pembrolizumab 200 mg Q3W
Month ≥6:	Response endpoint assessments
Month 12:	Response endpoint assessments
Month 24:	End of study

**Retreatment for qualifying patients ≥12 mos after prior lerapolturev dose*

Interim Analysis

- Radiographic response (ORR, DCR), DOR, PFS and OS at 6 and 12 months
- Exploratory correlative analyses and preliminary analyses on peripheral blood and tumor tissue to further elucidate mechanism of action

CED, convection-enhanced delivery; cPD, confirmed progressive disease; CTCAE, common terminology criteria for adverse events; DCR, disease control rate; DOR, duration of response; DRR, durable radiographic response rate; IPOL®, poliovirus vaccine inactivated; iRANO, immunotherapy response assessment for neuro-oncology; IV, intravenous; KPS, Karnofsky performance status; ORR, objective radiographic response rate; PFS, progression free survival; PTE, peritumoral edema; PV, poliovirus; lerapolturev, recombinant polio:rhinovirus intratumoral immunotherapy; Q3W, every 3 weeks; rGBM, recurrent glioblastoma; TCID, tissue culture infectious dose; TEAE, treatment emergent adverse event

For more info. visit: Istarioncology.com, https://clinicaltrials.gov/ct2/show/NCT04479241 or email: LUMINOS-101@istarioncology.com