VBI VACCINES

ACTIVATING THE POWER WITHIN

Early Tumor Response Data from the Randomized, Controlled Phase 2b Trial of VBI-1901 for the Treatment of Recurrent Glioblastoma

World Vaccine Congress 2024

NASDAQ : VBIV

April 3, 2024

Forward-Looking & Safe Harbor Statements

Certain statements in this presentation that are forward-looking and not statements of historical fact are forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and are forward-looking information within the meaning of Canadian securities laws (collectively "forward-looking statements").

The Company cautions that such statements involve risks and uncertainties that may materially affect the Company's results of operations. Such forward-looking statements are based on the beliefs of management as well as assumptions made by and information currently available to management.

Actual results could differ materially from those contemplated by the forward-looking statements as a result of certain factors, including but not limited to, the Company's ability to regain and maintain compliance with the listing standards of the Nasdaq Capital Market, the Company's ability to satisfy all of the conditions to the consummation of the transactions with Brii Biosciences, the Company's ability to comply with its obligations under its loan agreement with K2 HealthVentures, the impact of general economic, industry or political conditions in the United States or internationally; the impact of the COVID-19 pandemic and the continuing effects of the COVID-19 pandemic on our clinical studies, manufacturing, business plan, and the global economy; the ability to successfully manufacture and commercialize PreHevbrio/PreHevbri; the ability to establish that potential products are efficacious or safe in preclinical or clinical trials; the ability to establish or maintain collaborations on the development of pipeline candidates and the commercialization of PreHevbrio/PreHevbri; the ability to obtain appropriate or necessary regulatory approvals to market potential products; the ability to obtain future funding for developmental products and working capital and to obtain such funding on commercially reasonable terms; the Company's ability to manufacture product candidates on a commercial scale or in collaborations with third parties; changes in the size and nature of competitors; the ability to retain key executives and scientists; and the ability to secure and enforce legal rights related to the Company's products.

A discussion of these and other factors, including risks and uncertainties with respect to the Company, is set forth in the Company's filings with the SEC and the Canadian securities authorities, including its Annual Report on Form 10-K filed with the SEC on March 13, 2023, and filed with the Canadian security authorities at sedar.com on March 13, 2023, as may be supplemented or amended by the Company's Quarterly Reports on Form 10-Q.

Given these risks, uncertainties and factors, you are cautioned not to place undue reliance on such forward-looking statements, which are qualified in their entirety by this cautionary statement. All such forward-looking statements made herein are based on our current expectations and we undertake no duty or obligation to update or revise any forward-looking statements for any reason, except as required by law.

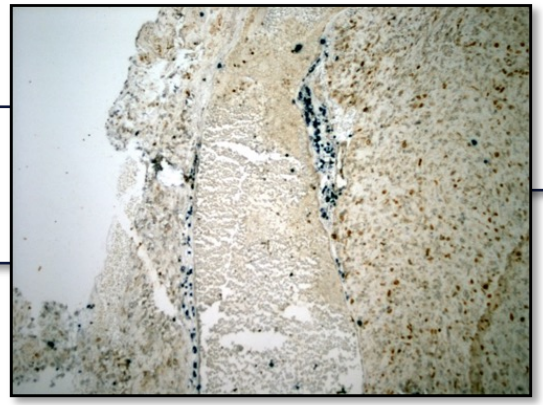
New Approaches are Required to Target Glioblastoma

Glioblastoma is among the most common and aggressive malignant brain tumors

Universally Fatal Brain Cancer

- Over 30,000 new glioblastoma (GBM) diagnoses per year (US/EU)
- ~15 months : median overall survival (mOS) in primary GBM
- ~8 months : mOS in recurrent GBM
- Recurrent tumors typically double in size every 6 weeks

GBM tumor – stained, 100x:
- Brown : Ki-67+
- Blue: CD3-



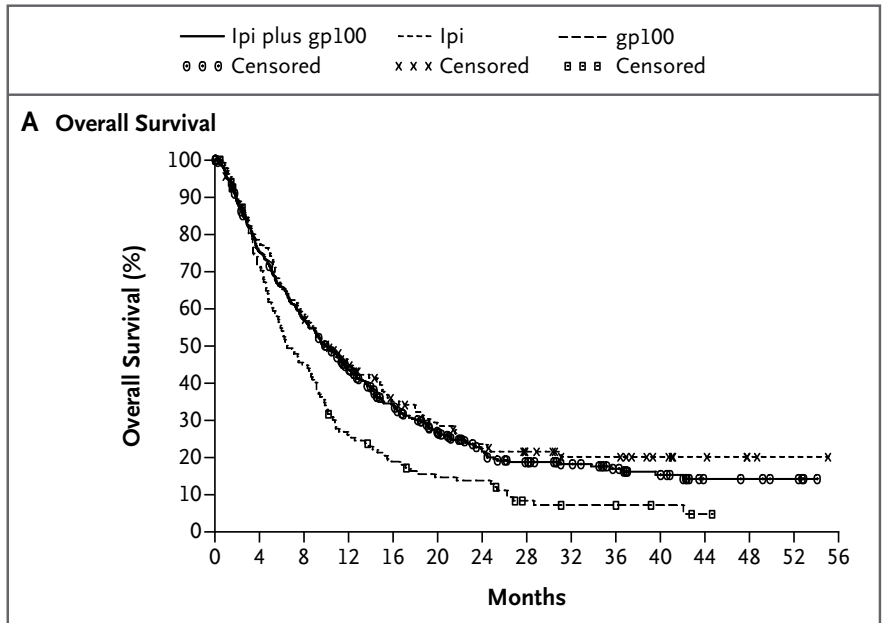
Given Medical Need, Approved Therapies Needed Only to Demonstrate Some Survival Benefits

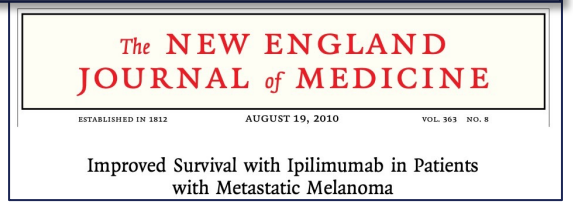
- Primary GBM
  - 2005 : **Temozolomide : 2.5-month extension** of mOS *[Stupp, R. 2005]*
  - 2017 : **Optune helmet : 4.9-month extension** of mOS *[Stupp, R. 2005]*
- Non-specific immunotherapy (PD1, CTLA-4) have failed

Antigen Selection is Critical to Restimulate Immunity and Redirect to the Tumor Microenvironment

Cancer vaccines have been proven to enhance Checkpoint Inhibitor efficacy when appropriate antigen(s) are targeted

Checkpoint Inhibitors + vaccination with poorly immunogenic antigens (gp100) did not improve survival in metastatic melanoma



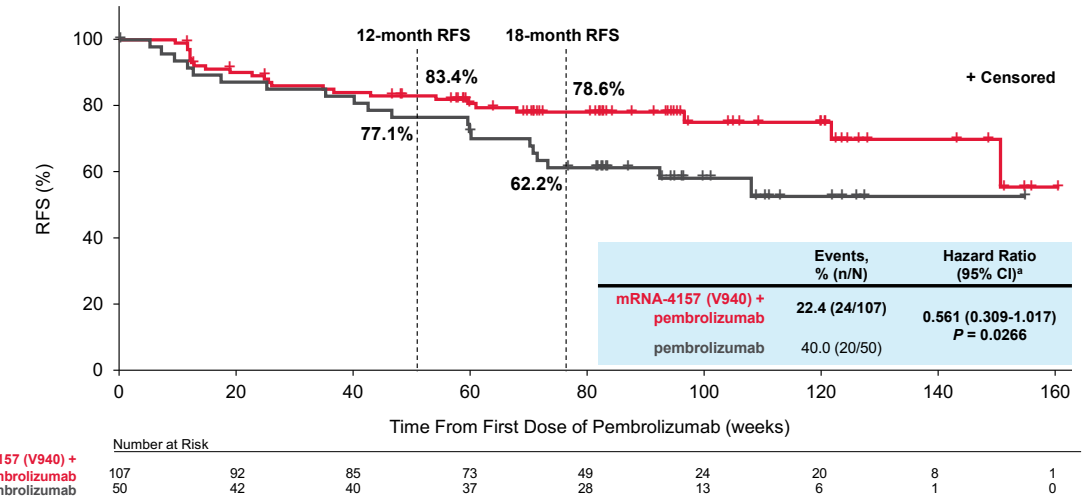

The NEW ENGLAND JOURNAL of MEDICINE
ESTABLISHED IN 1812 AUGUST 19, 2010 VOL. 363 NO. 8

Improved Survival with Ipilimumab in Patients with Metastatic Melanoma

Checkpoint Inhibitors + vaccination with immunogenic antigens improved overall survival

Distant Metastasis-Free Survival Results from the Randomized, Phase 2 mRNA-4157-P201/KEYNOTE-942 Trial, evaluating Moderna's mRNA-based personalized cancer vaccine (mRNA-4157) + Keytruda® (pembrolizumab)

Primary Efficacy Endpoint: RFS[1] *(relapse-free survival)*



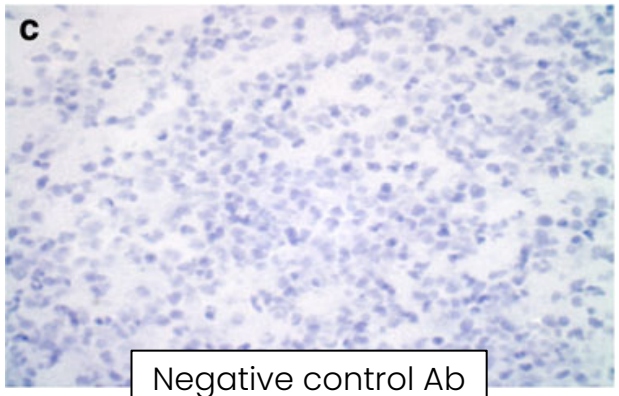
[a]The hazard ratio and 95% CI for mRNA-4157 (V940) plus pembrolizumab versus pembrolizumab is estimated using a Cox proportional hazards model with treatment group as a covariate, stratified by disease stage (stages IIIB or IIIC or IIID vs stage IV) used for randomization. The *P* value is based on a 1-sided log-rank test stratified by disease stage (stages IIIB or IIIC or IIID vs stage IV) used for randomization.

1. Khattak A, et al. Presented at the American Association for Cancer Research® (AACR) Annual Meeting; April 14-19, 2023; Orlando, FL, USA. Oral presentation CT001.

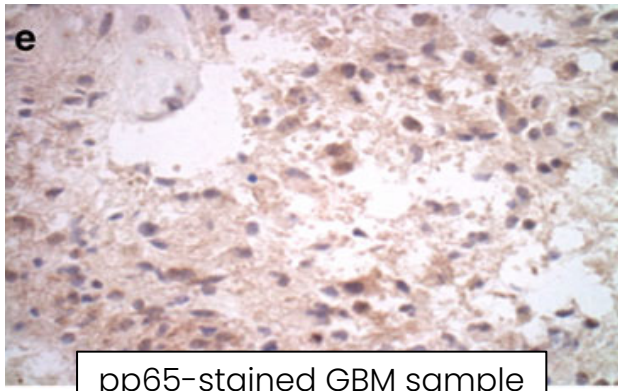
Cytomegalovirus (CMV) is a Highly Immunogenic Viral Target Present in Over 90% of GBM Tumors

Using a variety of techniques, multiple labs have confirmed the presence of CMV antigens in GBM tumor samples, but not in adjacent healthy tissue[1]

Immuno-histochemical staining of CMV pp65 antigen in a GBM sample



Negative control Ab



pp65-stained GBM sample

Lucas KG (2011)

Five clinical studies involving CMV-specific vaccination or infusion of autologous CMV-specific T-cells have demonstrated encouraging signals of efficacy[2]

Source(s): [1]Cobbs CS, 2002; Mitchell DA, 2007; Nair SK, 2014; [2]Crough T, 2012; Schuessler A, 2014; Mitchell DA, 2015; Batich K, 2017; Weather S-P, 2020

Our Approach to Cancer Vaccines is Differentiated from Historical Attempts to Treat GBM

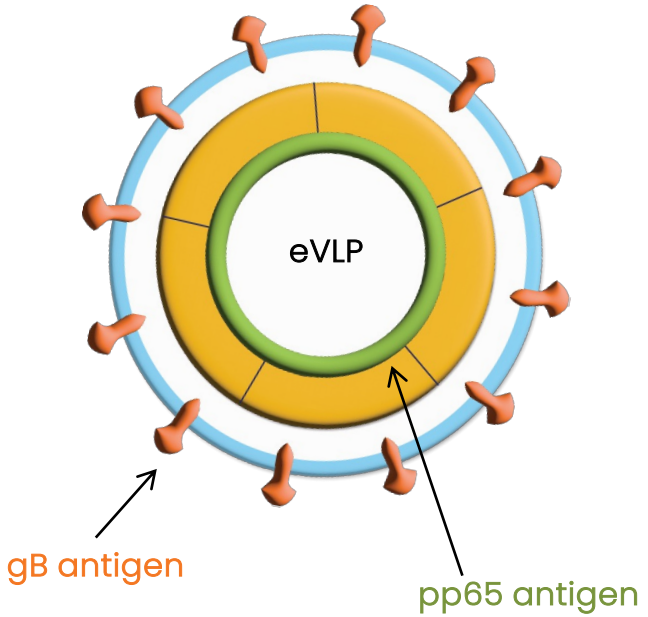
Shortcomings of Past Cancer Vaccine Approaches

Previous cancer vaccines have failed in GBM studies due to poorly immunogenic delivery, which lacked:

- Inherent potency
- Balanced immunity
- Breadth

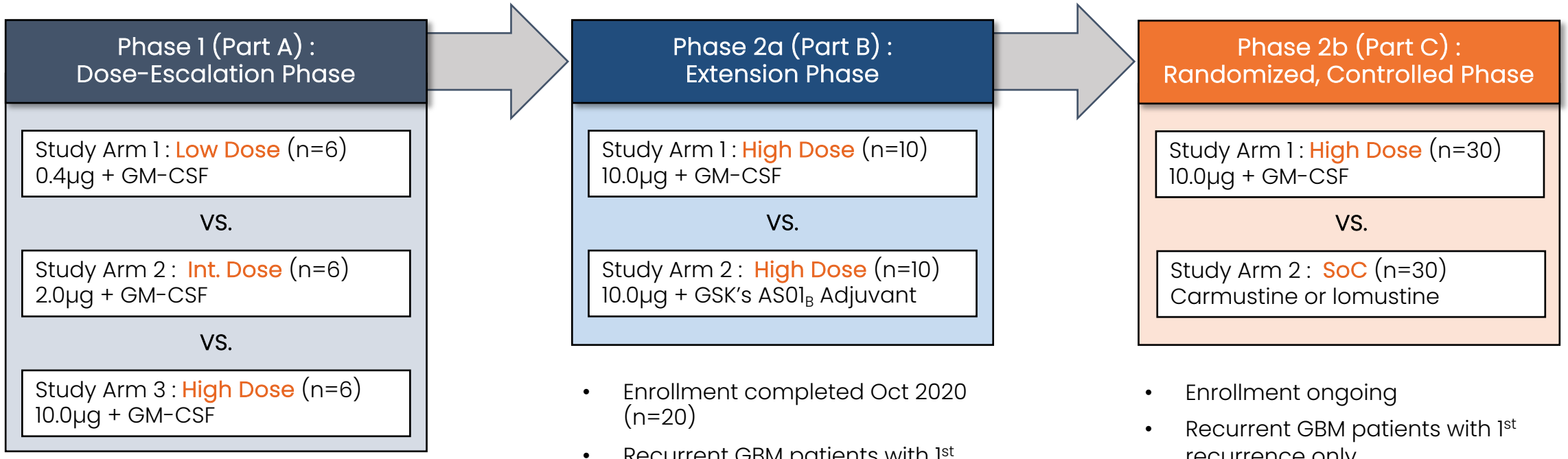
VBI's Enveloped Virus-Like Particle (eVLP) Approach : VBI-1901

- Targets CMV+ tumors leveraging anti-viral immunity
- Induces strong T-cell (both CD4+ and CD8+) and B-cell immunity
- Expresses 2 full-length antigens that are major T- and B-cell targets
- eVLPs present antigens to dendritic cells to stimulate both innate and adaptive immunity



VBI-1901 is currently in Phase 2b of the ongoing Phase 1/2 study in recurrent GBM patients

Design & Objectives : Ongoing Phase 1/2 Study in Recurrent GBM Patients



- Enrollment completed Dec 2018 (n=18)
- Recurrent GBM patients with any number of recurrences

- Enrollment completed Oct 2020 (n=20)
- Recurrent GBM patients with 1st recurrence only

- Enrollment ongoing
- Recurrent GBM patients with 1st recurrence only

Data from Part A & B of Ongoing Phase 1/2 Study

As at August 1, 2023

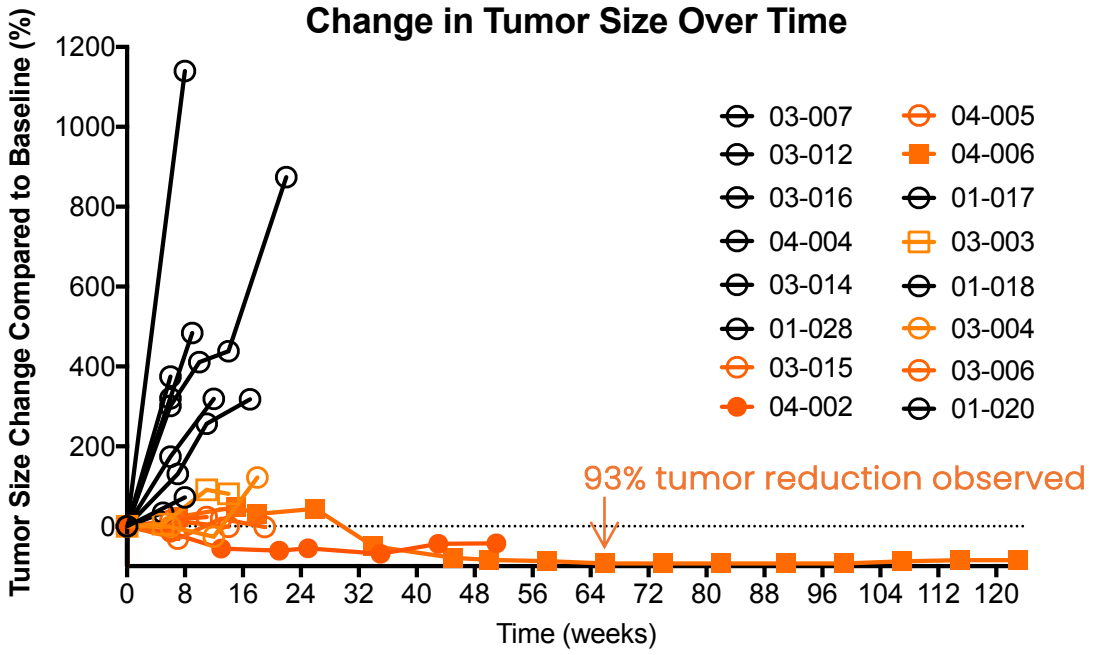
Based on the below results, U.S. FDA granted Fast Track Designation and Orphan Drug Designation to VBI-1901 + GM-CSF for the treatment of recurrent GBM patients with first tumor recurrence

Tumor Responses

High Dose: Parts A & B

Disease Control Rate : 44% (n=7/16)

2 Partial Responses (PR)+ 5 Stable Disease (SD)



Legend:

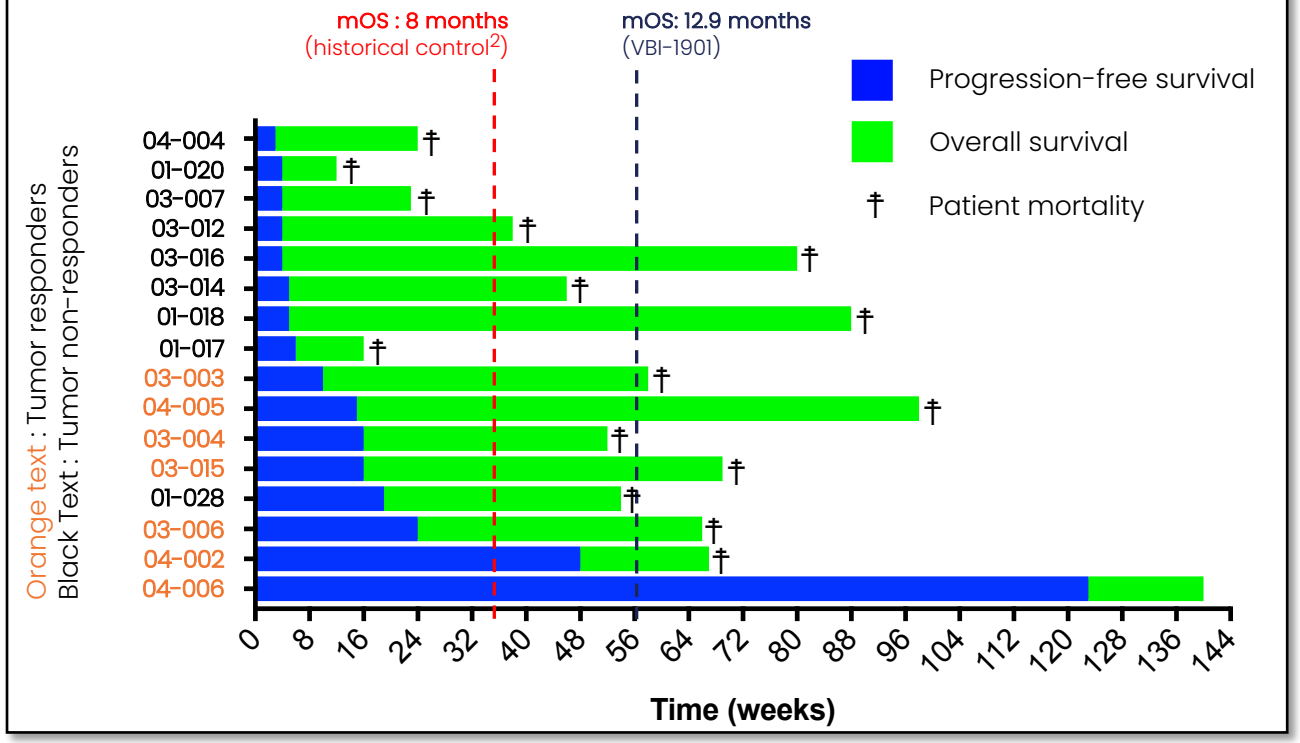
- Progressive Disease
- Stable Disease (SD)
- SD + Pseudo-progression
- Partial Response (PR)
- PR + Pseudo-progression

Clinical (Survival) Responses

High Dose: Part B

mOS reached at 12.9 months vs. 8 months with historical control

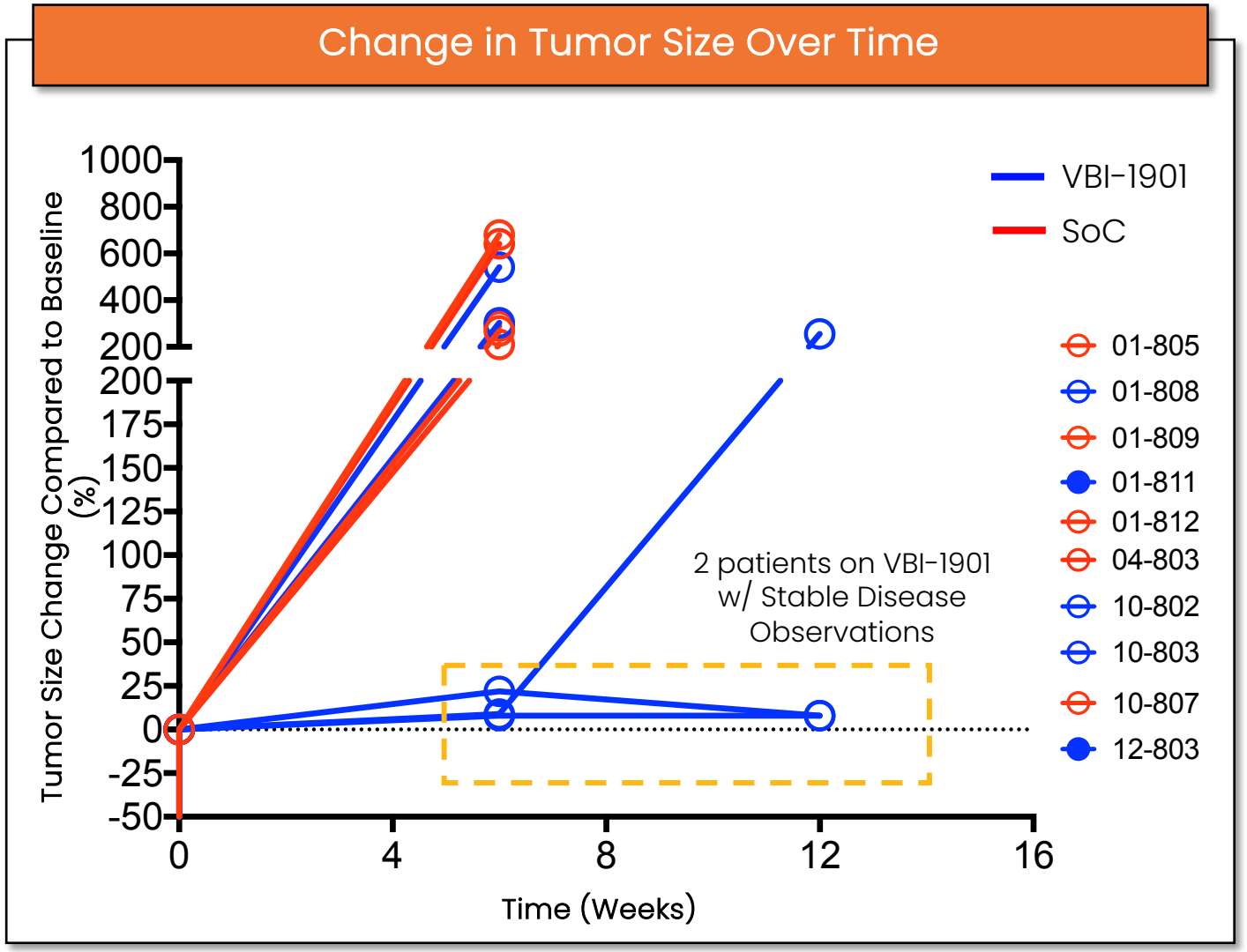
12-month OS : 62.5% (n=10/16) *(Taal, 2014)*



Early Tumor Response Data from Part C (Phase 2b) of Ongoing Phase 1/2 Study

- 17 patients have been randomized and received first dose of treatment as of March 22, 2024
  - N=8 : Standard-of-Care (SoC) arm (Carmustine or lomustine)
  - N=9 : VBI-1901 arm
- 11 patients currently evaluable for tumor response assessment
  - 0/6 patients on SoC have been on protocol for longer than 6 weeks
  - 2/5 patients on VBI-1901 have stable disease (12 weeks without tumor progression)

Separation of tumor response trends observed to date in SoC arm and VBI-1901 arm is expected based on data from Part A and B and known efficacy of SoC



Summary and Next Steps for VBI-1901

Summary of Part A&B

- **~5-month improvement in mOS** observed vs. historical standard-of-care (12.9 months vs. 8 months)
- 12-month OS : 62.5% (n=10/16)
- **2 partial tumor responses** (PRs)
- **93% tumor reduction** seen in one patient who remained on treatment > 28 months
- **44% disease control rate** achieved (n=7/16)
- Study results foundational for Part C randomized, controlled trial under FDA Fast-Track Designation

Early Data from Part C

- **Early data are consistent with data from Part A and Part B**
- To date, 40% disease control rate in VBI-1901 study arm vs. 0% in standard-of-care study arm
- Already observing separation in tumor response trends between the two study arms
- Pending tumor response rates and overall survival data, results may provide potential for Accelerated Approval under FDA Fast Track Designation

Next Steps

- 14 clinical sites are actively recruiting across the United States
  - Two new sites came online in March 2024, with another site expected in April
  - Enrollment in Q1 2024 has been 2x the enrollment rate observed in Q4 2023
- **Additional interim data expected mid-year and year-end 2024**

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