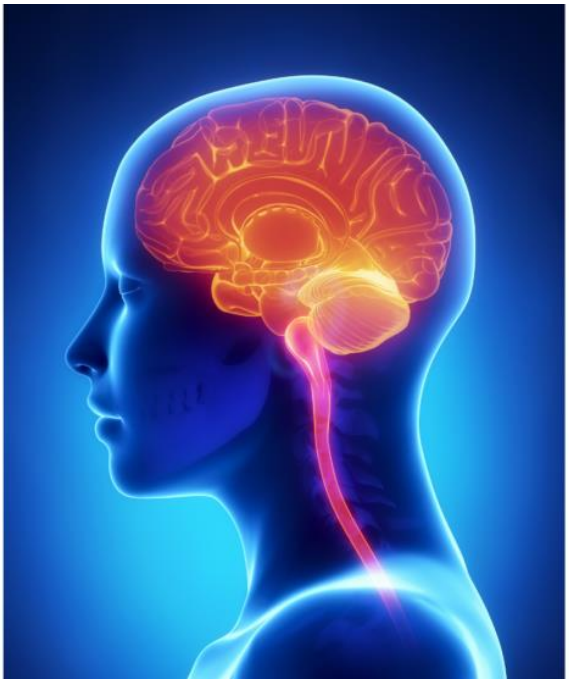
Biodexa's MTX110 Shows Promise In Extending Life Expectancy Against Aggressive Brain Cancers

Topline Results For Progression-Free Survival Expected In Q2 2024

Faith Ashmore, Benzinga Staff Writer
March 28, 2024



Biodexa Pharmaceuticals (NASDAQ:BDRX) ("Biodexa"), an acquisition-focused biopharmaceutical company, is developing MTX110 for the treatment of Diffuse Midline Glioma (DMG) in pediatric patients and for Recurrent Glioblastoma (rGBM) in adults; two aggressive brain cancers with universally poor prognoses.

The company says early trials of MTX110 in both cancers show promise in extending survival rates beyond those reported in previously published studies.

DMG tumors are highly aggressive grade IV tumors that exhibit a propensity to infiltrate the surrounding tissues. Commonly found throughout the brainstem, these tumors pose significant challenges in treatment. The median overall survival rate for individuals - typically children diagnosed with diffuse midline glioma is less than one year - generally ranges from eight to 11 months. A small percentage, approximately 10%, manage to survive for at least two years following diagnosis.

Glioblastoma (GBM) is the most prevalent malignant primary tumor of the central nervous system in adult patients and is known for its aggressive nature and tendency to

invade surrounding tissues. Although GBM is rare, it carries a high fatality rate, with an incidence of 3.44 per 100,000 individuals and a median overall survival of only eight months, regardless of treatment. The five-year survival rate stands at a mere 7.2%. Recurrence poses a significant challenge for adult patients with GBM, and the prognosis remains bleak. Tumor recurrence, typically occurring within seven months from the initial diagnosis, is the primary cause of mortality.

Both cancers have a high mortality rate and a high unmet need. Biodexa is hoping to meet these needs as it further develops MTX110. The main chemotherapy agent of MTX110, panobinostat, was originally used to treat multiple myeloma and received FDA approval in 2015. The company is currently reworking the chemotherapy agent by changing its delivery method and leveraging Convection Enhanced Delivery (CED) technology.

Researchers discovered that the original formulation of panobinostat was capable of blocking enzymes involved in cancer cell growth, exhibiting high potency against brain stem tumor cells in vitro and in vivo. However, the original oral tablet form is both insoluble and incapable of crossing the blood-brain barrier at therapeutic levels - making it an ineffective treatment method for brain cancers.

The distinctive feature of MTX110 is that it combines a water-soluble form of panobinostat with a CED device that delivers the drug directly to the brain tumor through a surgically implanted catheter and refillable pump. Biodexa says the drug achieves high drug concentrations within the tumor while limiting systemic exposure.

The proof-of-concept phase 1 clinical trial of MTX110 took place at the University of California San Francisco with patients battling DMG. The trial produced promising results with a median overall survival of 26 months, compared to a historical overall survival rate of 10 months. Similarly, a phase 1 trial involving newly diagnosed DMG patients at Columbia University Irving Medical Center also had encouraging outcomes, with MTX110 treatment increasing median overall survival to 16 months from a historical overall survival rate of 10 months.

The findings from this study will be presented at the 21st International Symposium on Pediatric Neuro-Oncology (June 28 - July 2, 2024), and the company may potentially continue developing the drug in this indication in a phase 2 study.

Biodexa reports that the ongoing MAGIC-G1 phase 1 trial in recurrent GBM patients at Duke Cancer Institute and Baptist MD Anderson Cancer Center is currently showing considerable progress with completion of recruitment for cohort A of the study. The first patient survived for 12 months, and three patients currently remain in the study. The expected topline results for progression-free survival from cohort A will be available in Q2 of 2024. The retrospective analysis of 299 patients with similar recurrent GBM disease showed a median overall survival of only 6.5 months after the recurrence of GBM cancer.

Biodexa is hopeful MTX110 could potentially help extend patient life, offering much-needed hope to patients and their families. The company's delivery method may also help prevent full-body exposure, which could minimize negative side effects. For cancers with such high mortality rates, any amount of extra time with a better quality of life is groundbreaking.

Featured photo sourced from Shutterstock

This post contains sponsored content. This content is for informational purposes only and is not intended to be investing advice.

Important notice, please read: Certain statements in this material are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. These statements may be identified by the use of forward-looking words such as "anticipate," "believe," "forecast," "estimate," "expect," and "intend," among others. These forward-looking statements are based on Biodexa's current expectations and actual results could differ materially. There are a number of factors that could cause actual events to differ materially from those indicated by such forward-looking statements. These factors include, but are not limited to, risks related to failure to obtain FDA clearances or approvals and noncompliance with FDA regulations; risks related to the timing and progress of clinical development of our product candidates; our need for additional financing; uncertainties of patent protection and litigation; uncertainties of government or third party payor reimbursement; limited research and development efforts and dependence upon third parties; and substantial competition. As with any pharmaceutical under development, there are significant risks in the development, regulatory approval, and commercialization of new products. Biodexa does not undertake an obligation to update or revise any forward-looking statement. Investors should read the risk factors set forth in the Annual Report on Form 10-K for the year ended December 31, 2022, as filed with the Securities and Exchange Commission (the "SEC") in March 2023, and periodic reports filed with the SEC on or after the date thereof. All Biodexa's forward-looking statements are expressly qualified by all such risk factors and other cautionary statements. The information set forth herein speaks only as of the date thereof. This is not a solicitation of any offer to buy or sell. Redington, Inc. is paid by Biodexa Pharmaceuticals PLC to provide investor relations services, and its employees or members of their families may from time to time own an equity interest in companies mentioned herein.