144-Week Analysis of the Confirmed Disability Worsening Events in the Open-Label Treatment Extension of the Phase 2 EMPhASIS Study of Vidofludimus Calcium in Patients with Relapsing-Remitting Multiple Sclerosis

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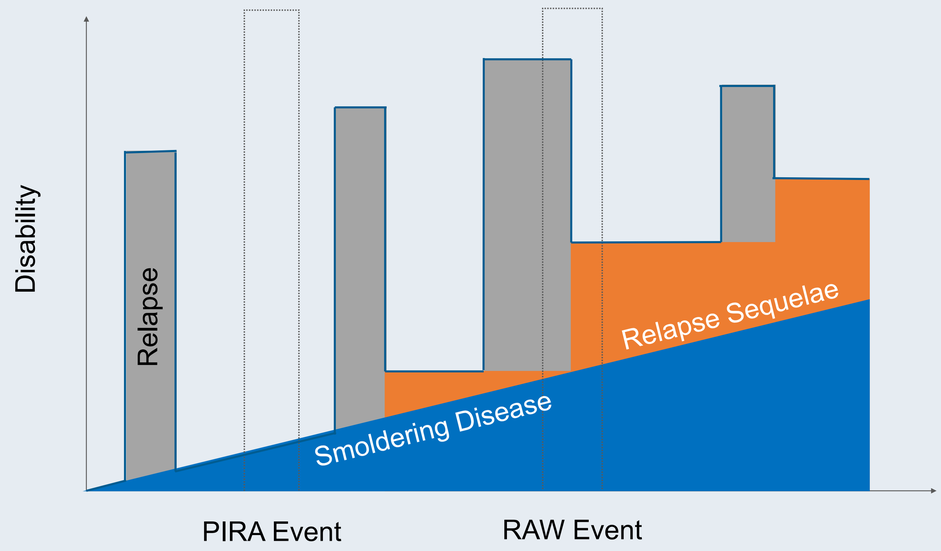
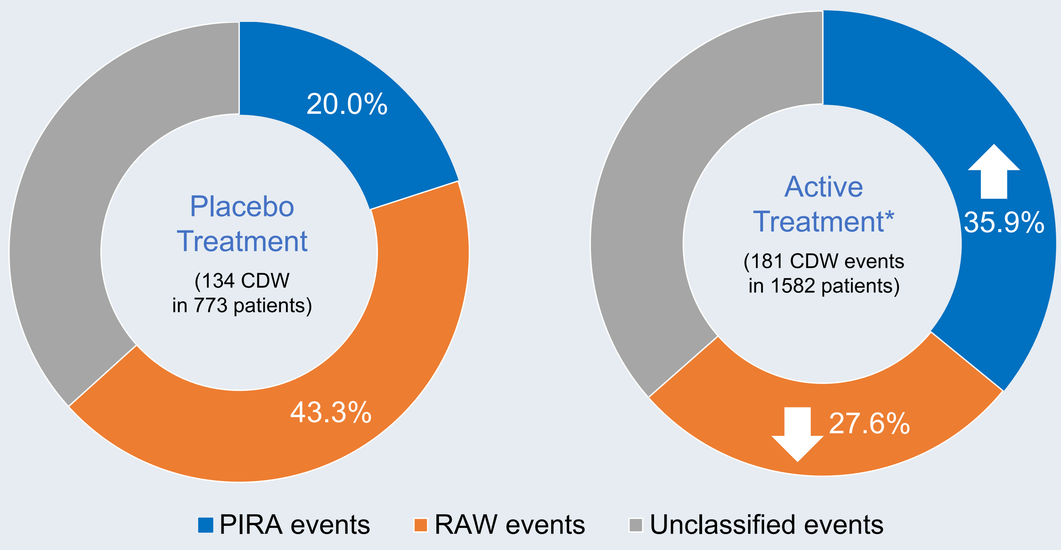
Background

Vidofludimus calcium (VidoCa) is a first-in-class, orally available activator of the neuroprotective transcription factor nuclear receptor related-1 (Nurr1). It also selectively inhibits dihydroorotate dehydrogenase (DHODH), demonstrating antiviral and anti-inflammatory effects. With its dual mode of action, VidoCa is designed to target both neurodegeneration and inflammation in multiple sclerosis (MS). A phase 3 program in relapsing multiple sclerosis (RMS) is currently ongoing (fully recruited with anticipated topline data by the end of 2026).

Recent data show that approximately half of the disability accumulation in RMS comes from progression independent of relapse activity (PIRA) and is contributed to the underlying “invisible disability accumulation” or “smoldering disease” (Lublin et al. [Brain. 2022]). In addition, the same meta-analysis found that current MS treatments disproportionally decreased relapse-associated worsening (RAW) events.



Adapted from Kretzschmar A., Symposium, Every Journey Begins with a Single Step: Visualizing the Chronic Nature of MS”, MSVirtual2020 / 8th Joint ACTRIMS-ECTRIMS Meeting



Lublin et al. [Brain 2022]. Full dataset of 27,328 patients, only displays data in relapsing-remitting MS patients (24,469 patients), arrows indicate increase/decrease of proportion in active treatment as compared to placebo treatment

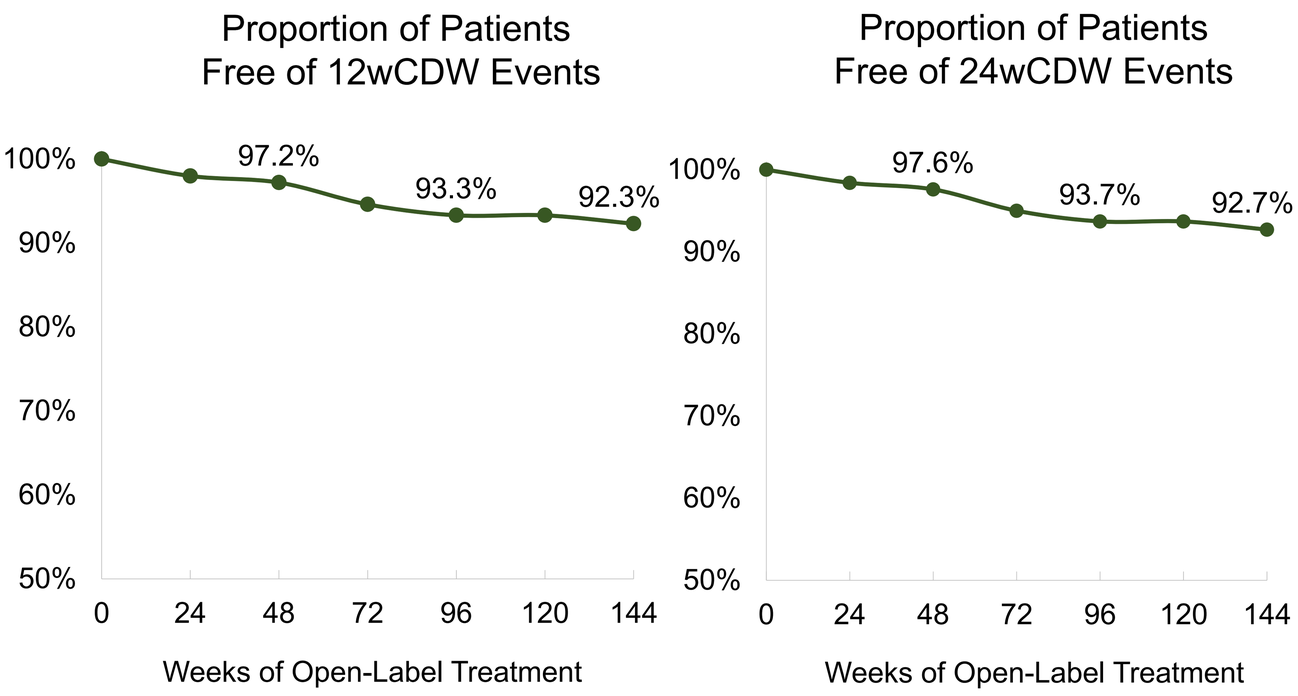
Objective

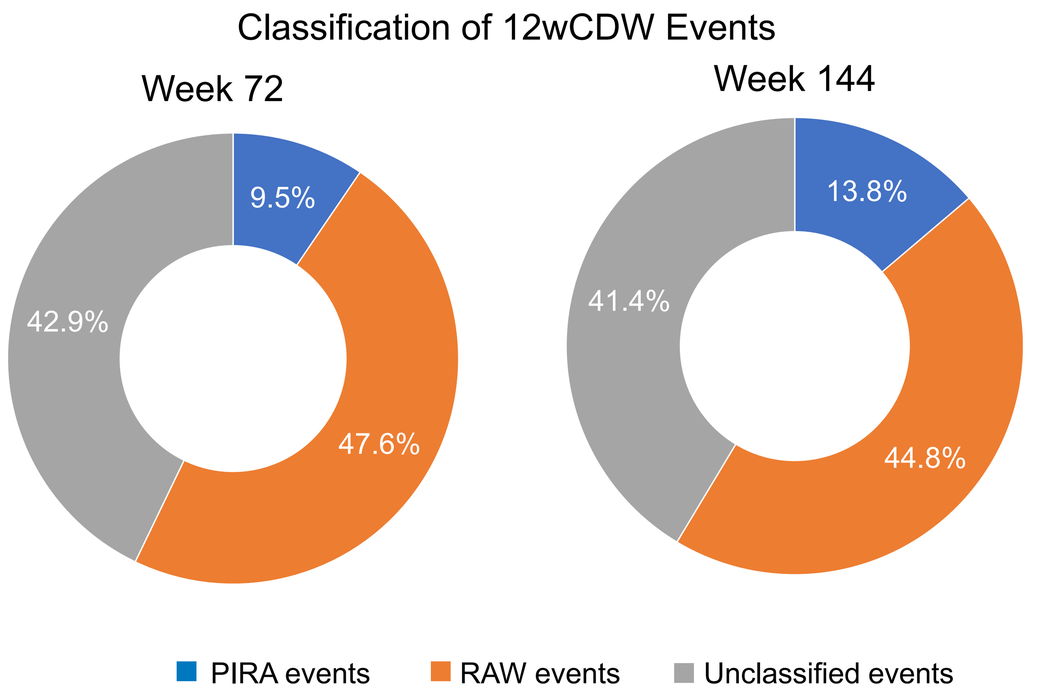
The phase 2 EMPhASIS trial of VidoCa in relapsing-remitting MS (RRMS) consisted of a 24-week double-blind treatment phase to investigate the effect of VidoCa versus placebo on MRI lesions, biomarkers, and other MS-related endpoints. Patients were included if they had an Expanded Disability Status Scale (EDSS) score between 0 and 4.0 (inclusive) at screening. At the end of the blinded phase, patients had the option to enter an open-label extension (OLE) period with VidoCa treatment. This poster presents the results of 144 weeks of follow-up on confirmed disability worsening (CDW) from the OLE period of the trial.

Methods

Of 268 patients with RRMS that started 24 weeks of double-blind treatment, 254 patients completed the blinded treatment period and then continued in the OLE period. Patients were initially given either 30 or 45 mg VidoCa once daily, and following full study results, all patients transitioned to 30 mg VidoCa once daily and, by data cutoff, continued up to 5.5 years on OLE treatment. Using a data cutoff of 14-Jan-2025, approximately 953 treatment years were included in this CDW analysis. At the time of data cutoff, 187 patients (79.5% of patients starting OLE) were evaluated up to Week 144 and are included in this CDW analysis.

Results





Conclusion

In the long-term OLE period of EMPhASIS, patients treated with VidoCa had a low rate of CDW events over time and more than 90% of patients stayed free of any CDW events after 144 weeks of open label treatment. Most remaining observed events were classified as RAW, and the rate of PIRA events was below 15% at 72 and 144 weeks of OLE treatment.

12w = 12 week; 24w = 24 week; CDW = confirmed disability worsening; DHODH = dihydroorotate dehydrogenase; MS = multiple sclerosis; Nurr1 = nuclear receptor related-1; OLE = open-label extension; PIRA= progression independent of relapse activity; RAW = relapse-associated worsening; RRMS = relapsing-remitting multiple sclerosis; VidoCa = vidofludimus calcium; EDSS = Expanded Disability Status Scale

* Active treatment included studies using fingolimod, siponimod and ofatumumab.

Disclosures: R.J. Fox reports personal consulting fees from Astoria Biologica, Biogen, Bristol Myers Squibb, Cognito, EMD Serono, Galvani, Immunic, INmune Bio, Kiniksa, Novartis, Sanofi, Siemens, and TG Therapeutics. I have served on advisory committees for AB Science, Biogen, Immunic, Novartis, and Sanofi, and received clinical trial contract and research grant funding from Biogen, Novartis, and Sanofi. C. Wolf is a partner at Lycalis srl. In the past 3 years, his organization has received compensation for his work from Alphasights Ltd, Hoffmann-LaRoche AG, Immunic AG, MaaT SA, Merck KGaG, Viatris Inc, and Viracta Inc as well as from several law firms, all commissioned by Viatris Inc. J. Sellner received honoraria for lectures, assembly of educational material or participation in scientific advisory boards of Alexion/Astra Zeneca, BMS, Biogen, Gerot-Lannach, Horizon/Amgen, Lundbeck, Immunic, Novartis, Pfizer, Roche, and Sandoz. V. Sciacca, M. Ondrus, J. Myles, and F. Ghadiri are employees of the trial sponsor A. Muehler is a shareholder and employee of trial sponsor and a holder of patents for the drug under investigation.