Treatment satisfaction, work productivity, and quality of life under adjunctive brivaracetam in earlier treatment lines in adults with focal-onset seizures: 12-month real-world data from BRITOBA

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Overview

QUESTION

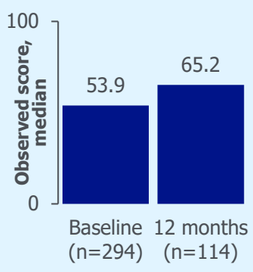
What effect does adjunctive brivaracetam (BRV) have on quality-of-life (QoL) outcomes in earlier treatment lines in adults with focal-onset seizures?

INVESTIGATION

Planned second interim analysis of BRITOBA (EP0103), a prospective, non-interventional, post-marketing study in Europe and Canada. QoL was assessed using patient-reported questionnaires in the Safety Set (SS; N=392) and Per-Protocol Set (N=319).

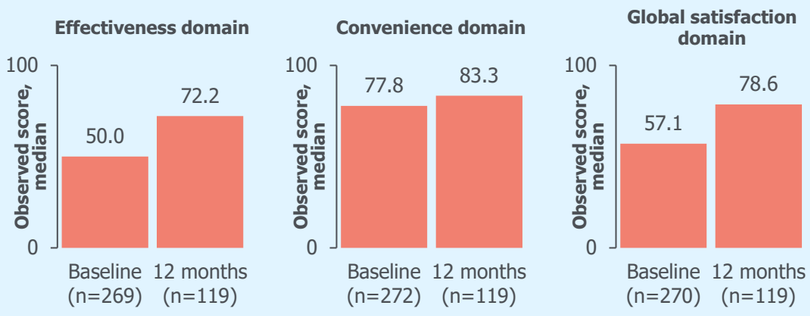
RESULTS (SS)

QoL (QOLIE-10-P)



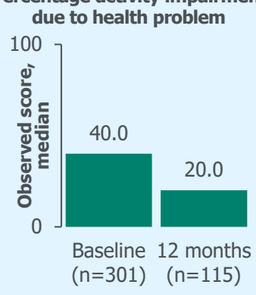
Improved QoL

Treatment satisfaction (TSQM-9)



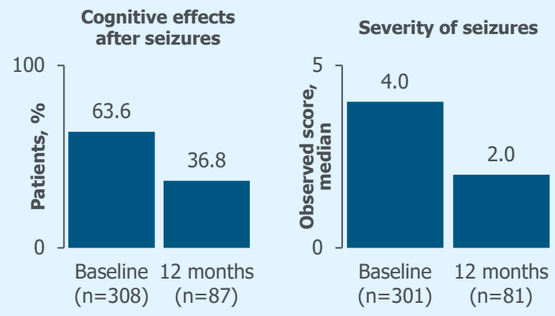
Effectiveness and convenience of newly introduced adjunctive BRV and greater satisfaction

Work productivity and impairment (WPAI:GH)



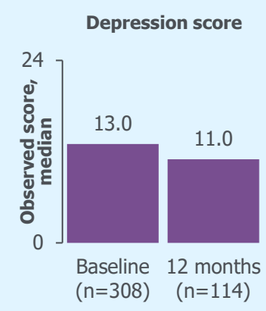
Less activity impairment due to health problems

Seizure severity (SSQ)



Reduction of cognitive effects and reduced seizure severity

Neurological Disorders Depression (NDDI-E)



Fewer depressive symptoms

NDDI-E, Neurological Disorders Depression Inventory for Epilepsy; QOLIE-10-P, Patient-Weighted Quality of Life in Epilepsy Inventory-10-P; SSQ, Seizure Severity Questionnaire; TSQM-9, Treatment Satisfaction Questionnaire for Medication-9; WPAI:GH, Work Productivity and Activity Impairment Questionnaire: General Health.

CONCLUSIONS

This second interim analysis of the non-interventional BRITOBA study provides patient-reported data suggesting that use of adjunctive BRV in earlier treatment lines (≤3 lifetime ASMs) for 12 months resulted in reduced activity impairment due to health problem, depression, and distress level, as well as improvements in seizure severity and cognitive effects following seizures. Overall QoL improved from baseline to 12 months of adjunctive BRV treatment and patients reported satisfaction with the newly introduced therapy regimen.

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Background

- Brivaracetam (BRV) is indicated for adjunctive therapy of focal-onset (partial-onset) seizures in patients ≥2 years of age in the European Union,[1] monotherapy and adjunctive therapy of focal-onset seizures in patients ≥1 month of age in the United States,[2] and adjunctive therapy of focal-onset seizures in patients ≥4 years of age (oral administration) and adult patients (oral and intravenous administration) in Canada.[3]
- Post-marketing data confirm BRV to be an effective and well-tolerated therapeutic option in difficult-to-treat populations with drug-resistant epilepsy.[4-7] Therefore, patients on earlier antiseizure medication (ASM) regimens might significantly benefit from combination with BRV.

Objective

- The overall objective of BRITOBA (Brivaracetam Adjunctive Therapy in Early Treatment Line Combinations; EP0103) is to evaluate the effectiveness, tolerability, and quality of life (QoL) of adjunctive BRV in earlier treatment lines in adults with focal-onset seizures in a non-interventional setting.
- The current second interim analysis evaluated QoL and patient-reported outcomes in patients taking adjunctive BRV for up to approximately 12 months of treatment.

Methods

STUDY DESIGN

- Planned second interim analysis of BRITOBA (EP0103), a prospective, non-interventional, post-marketing study of adjunctive BRV at 81 clinical/office-based sites in Europe (France, Germany, Italy, and Spain) and Canada.
- BRV was prescribed per standard practice. Patients were observed for up to approximately 12 months.
- Eligible patients were ≥18 years of age, with a history of focal-onset seizures (with/without focal to bilateral tonic-clonic seizures), no BRV treatment before study entry, ≥1 ASM at BRV initiation, and ≤3 lifetime ASMs (prior and concomitant ASMs at BRV initiation).

OUTCOMES AND MEASUREMENTS

- QoL was assessed using patient-reported questionnaires: Patient-Weighted Quality of Life in Epilepsy Inventory-10-P (QOLIE-10-P), Treatment Satisfaction Questionnaire for Medication-9 (TSQM-9), Work Productivity and Activity Impairment Questionnaire: General Health (WPAI:GH), Seizure Severity Questionnaire (SSQ), and Neurological Disorders Depression Inventory for Epilepsy (NDDI-E). Paper questionnaires and the Helpilepsy™ mobile application were used.
- Questionnaire data are reported for baseline and the 12-month visit.
  - Interim effectiveness and tolerability outcomes from BRITOBA are presented in poster 410.
- All Patients Documented (APD) Set: all patients included in the study with valid data consent and at least visit 1 (baseline) documented.
- Safety Set (SS): all patients in the APD Set who received ≥1 dose of BRV.
- Per-Protocol Set (PPS): all patients in the SS who were treated according to the approved Summary of Product Characteristics during their observation period, representing on-label use of BRV in Europe and Canada. Patients who violated ≥1 selection criterion were excluded.

Results

PATIENT DISPOSITION AND DEMOGRAPHICS

- At the time of the data snapshot (16 May 2023), 392 patients had received ≥1 dose of BRV (SS), of whom 319 were included in the PPS.
- In the SS, 199 (50.8%) patients completed the 12-month/end-of-study visit at the time of this interim analysis (PPS: 163 [51.1%]).

Demographics and baseline epilepsy characteristics

	SS (N=392)	PPS (N=319)
Patient demographics		
Age, mean (SD), years	44.9 (17.4)	46.0 (17.5)
Male, n (%)	204 (52.0)	171 (53.6)
Epilepsy characteristics		
Time since epilepsy diagnosis, mean (SD), years	13.1 (13.2)[a]	13.4 (13.6)[b]
Any baseline focal-onset seizures, n (%)	381 (97.2)[c]	311 (97.5)[d]
Any baseline focal to bilateral tonic-clonic seizures, n (%)	143 (36.5)[e]	123 (38.6)[f]
Baseline seizure frequency per 28 days,[g] mean (SD)		
Focal-onset seizures	6.3 (21.7)[h]	6.9 (23.9)[i]
Focal to bilateral tonic-clonic seizures	1.3 (2.9)[j]	1.2 (2.6)[k]
Number of lifetime ASMs, mean (SD)	2.0 (0.9)	1.9 (0.9)
Number of concomitant ASMs at BRV initiation, mean (SD)	1.5 (0.8)	1.4 (0.6)

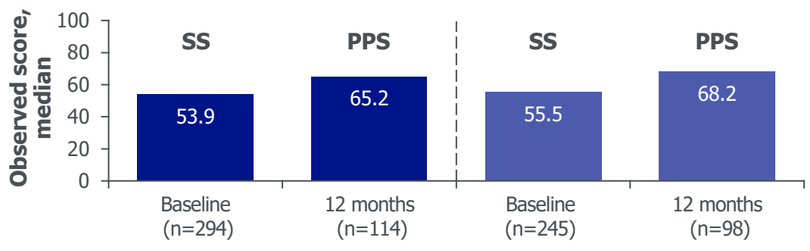
[a]n=388; [b]n=315; [c]9 (2.3%) patients had missing data; [d]8 (2.5%) patients had missing data; [e]8 (2.0%) patients had missing data; [f]7 (2.2%) patients had missing data; [g]Based on the previous 3 months; [h]n=381; [i]n=311; [j]n=143; [k]n=123. ASM, antiseizure medication.

BRV DOSING

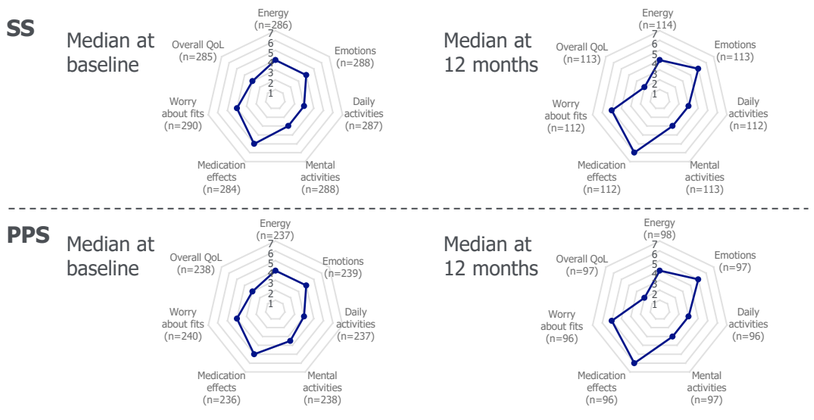
- In the SS, the mean/median daily BRV dose was 81.8/50.0 mg/day (n=392) at visit 1 (PPS: 86.2/100.0 mg/day [n=319]) and 124.2/100.0 mg/day (n=195) at 12 months (PPS: 118.8/100.0 mg/day [n=160]).

QUALITY OF LIFE

QOLIE-10-P total score



QOLIE-10-P Q12 domain ranking by importance

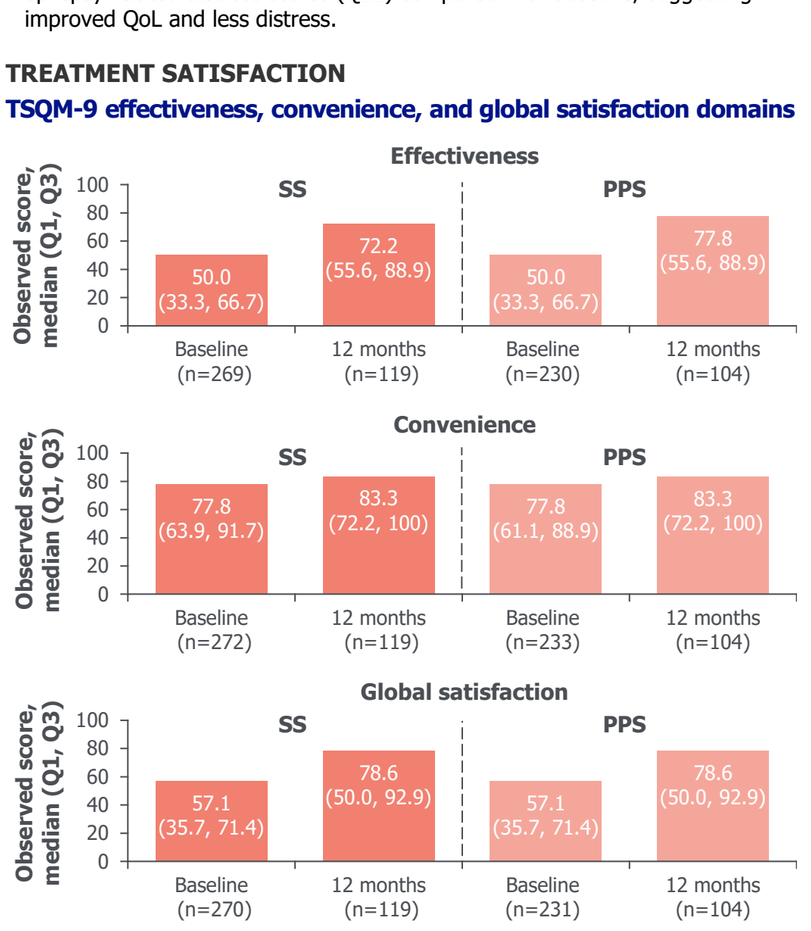


For Q12 of domain ranking, 1 indicates most important and 7 indicates least important. Q12, question 12; QoL, quality of life; QOLIE-10-P, Patient-Weighted Quality of Life in Epilepsy Inventory-10-P.

- At 12 months, patients reported higher median QOLIE-10-P total scores and epilepsy-related distress scores (Q11) compared with baseline, suggesting improved QoL and less distress.

TREATMENT SATISFACTION

TSQM-9 effectiveness, convenience, and global satisfaction domains



Scores for each domain (effectiveness, convenience, and global satisfaction) were computed by adding the TSQM items in each domain and then transforming the composite score into a value ranging from 0 to 100. Q1, first quartile; Q3, third quartile; TSQM-9, Treatment Satisfaction Questionnaire for Medication-9.

- Median TSQM-9 scores were numerically higher at 12 months vs baseline, suggesting effectiveness, convenience, and greater satisfaction with newly introduced adjunctive BRV.

WORK PRODUCTIVITY AND ACTIVITY IMPAIRMENT

WPAI:GH

	SS (N=392)			PPS (N=319)		
	n	Mean (SD)	Median (Q1, Q3)	n	Mean (SD)	Median (Q1, Q3)
Percentage activity impairment due to health problem						
Baseline	301	40.7 (31.3)	40.0 (10.0, 70.0)	248	41.8 (31.1)	40.0 (10.0, 70.0)
12 months	115	28.3 (30.4)	20.0 (0.0, 50.0)	101	27.7 (29.8)	20.0 (0.0, 50.0)
Percentage of work time missed due to health problem						
Baseline	113	19.5 (33.9)	0.0 (0.0, 23.7)	94	18.3 (34.3)	0.0 (0.0, 18.2)
12 months	43	9.5 (20.1)	0.0 (0.0, 12.5)	37	9.2 (20.6)	0.0 (0.0, 11.5)
Percentage impairment while working due to health problem						
Baseline	143	31.3 (31.4)	20.0 (0.0, 50.0)	119	32.7 (31.5)	20.0 (10.0, 50.0)
12 months	50	23.6 (29.3)	10.0 (0.0, 50.0)	44	24.1 (29.4)	10.0 (0.0, 50.0)
Percentage overall work impairment due to health problem						
Baseline	111	39.5 (34.7)	30.0 (10.0, 70.0)	93	39.3 (35.0)	30.0 (10.0, 70.0)
12 months	43	32.2 (33.7)	20.0 (0.0, 70.0)	37	33.2 (34.1)	20.0 (0.0, 70.0)

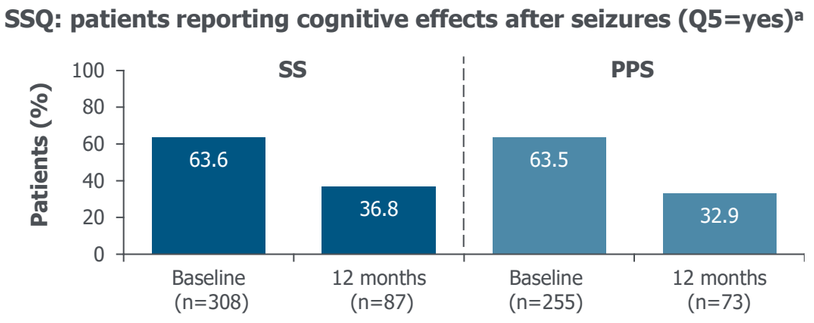
Q1, first quartile; Q3, third quartile; WPAI:GH, Work Productivity and Activity Impairment Questionnaire: General Health.

- WPAI:GH showed less activity impairment and time missed at work due to health problems and better productivity between baseline and 12 months.

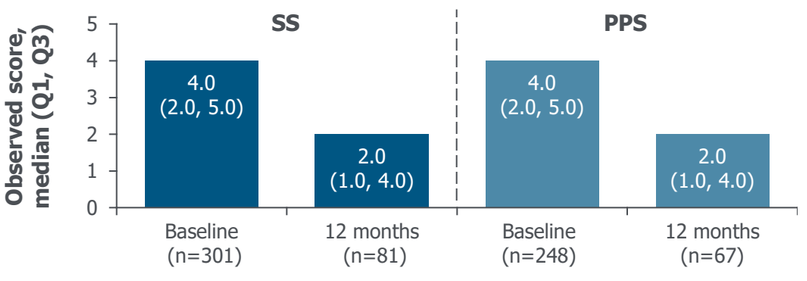
SEIZURE SEVERITY

SSQ cognitive effects after seizures and seizure intensity

SSQ: patients reporting cognitive effects after seizures (Q5=yes)[a]



SSQ: severity (intensity) of seizures in the past 4 weeks (Q8)[b]



[a]Patients were asked (yes/no) whether they had cognitive effects after seizures; [b]Patients were asked to rate the severity (intensity) of their seizures on a 7-point scale, with 1 being very mild and 7 being very severe (a higher SSQ score reflects worse outcome). Q1, first quartile; Q3, third quartile; Q5, question 5; Q8, question 8; SSQ, Seizure Severity Questionnaire.

- Median SSQ scores (Q5, Q8) showed a reduction from baseline to 12 months, indicating a lower number of patients with cognitive effects after seizures and reduced severity of seizures.

NEUROLOGICAL DISORDERS DEPRESSION

NDDI-E

NDDI-E score ranges from 6 to 24. Q1, first quartile; Q3, third quartile; NDDI-E, Neurological Disorders Depression Inventory for Epilepsy.

- Median NDDI-E scores showed a slight improvement in depressive symptoms between baseline and 12 months.

Limitations

- Second interim analysis of the non-interventional BRITOBA study.
- Caution should be applied when interpreting patient-reported outcomes.
  - 50.8% of patients in the SS and 51.1% in the PPS completed the 12-month visit at the cut-off date.
  - Due to missing data for some questionnaire outcomes; the results shown are for observed cases.

Conclusions

- This second interim analysis included patient-reported data suggesting that use of adjunctive BRV in earlier treatment lines (≤3 lifetime ASMs) for 12 months resulted in reductions in distress in epilepsy, depressive symptoms, and activity impairment as well as improvements in work productivity, cognitive effects after seizures, and seizure severity.
- Overall QoL improved from baseline to 12 months upon initiation of adjunctive BRV treatment and patients reported satisfaction with the new treatment regimen.

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