Long-Term Prophylactic Treatment With Oral Deucrictibant Improved Health-Related Quality of Life in Participants With Hereditary Angioedema: Final Results of the Phase 2 CHAPTER-1 Open-Label Extension Study

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Key takeaways

Final data from the completed open-label extension (OLE) of the Phase 2 CHAPTER-1 study provide further evidence on the sustained effects of long-term prophylactic treatment with the orally administered bradykinin B2 receptor antagonist deucrictibant on health-related quality of life (HRQoL), disease control, and treatment satisfaction for participants with hereditary angioedema (HAE).

PGA-Change	AE-QoL	AECT	TSQM
100% of participants who received deucrictibant 40 mg/day at weeks 12 and 134 reported improved HRQoL	Week 4 → Week 134: Clinically meaningful improvement in HRQoL at week 4 and effects sustained through week 134	**100%** of participants at weeks 62–134 in the OLE reported well-controlled HAE[a]	Week 12 → Week 134: Greater overall participant satisfaction vs placebo at week 12 remained high through week 134

AECT, Angioedema Control Test; AE-QoL, Angioedema Quality of Life Questionnaire; HAE, hereditary angioedema; HRQoL, health-related quality of life; OLE, open-label extension; PGA-Change, Patient Global Assessment of Change; TSQM, Treatment Satisfaction Questionnaire for Medication. [a]Well-controlled HAE defined as AECT score ≥10.

This presentation includes data for an investigational product not yet approved by regulatory authorities.

Background

- **Hereditary angioedema (HAE):** a bradykinin-mediated condition with painful swelling attacks affecting multiple locations in the body and negatively impacting health-related quality of life (HRQoL).[1-7]
- **Unmet need:** additional prophylactic treatments offering injectable-like efficacy™, a well-tolerated profile, and ease of administration.[8-11]
- **Oral deucrictibant:** a selective, investigational, bradykinin B2 receptor antagonist under development for both prophylactic and on-demand treatment of attacks of bradykinin-mediated angioedema, including HAE.[11-23]

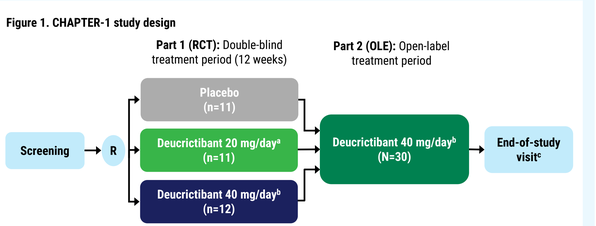
Objective

To evaluate the long-term impact of orally administered deucrictibant prophylactic treatment on HRQoL, disease control, and treatment satisfaction in adults with HAE in the open-label extension (OLE) of the CHAPTER-1 study.[18]

Methods

- **CHAPTER-1 (NCT05047185)*:** a two-part, Phase 2 study.[18,21]
  - Part 1 randomized controlled trial (RCT) and Part 2 OLE were completed.
- **Eligible participants:** adults diagnosed with HAE-1/2, not receiving other prophylactic treatments at screening, and with a pre-specified minimum number of attacks in the 3 months prior to screening.

Figure 1. CHAPTER-1 study design



IR, immediate-release; OLE, open-label extension; R, randomization; RCT, randomized controlled trial. n = number of participants randomized in each treatment group in the RCT. N = number of participants. [a]Deucrictibant IR capsule, 10 mg twice daily. [b]Deucrictibant IR capsule, 20 mg twice daily. [c]Twenty-one participants rolled over to the CHAPTER-4[20] (NCT06679881) OLE in which deucrictibant extended-release tablet is administered.

Methods

Patient-reported outcome instruments

Patient Global Assessment of Change (PGA-Change)[24]: a tool that uses a five-point Likert response scale to assess the change in the impact of HAE on patient's HRQoL since starting study treatment compared with pre-treatment:

Much worse → A little worse → No change → A little better → Much better

Angioedema Quality of Life Questionnaire (AE-QoL)[25-27]: a tool validated for HAE and composed of a 17-item questionnaire with a five-point response scale used across four domains, "functioning," "fatigue/mood," "fear/shame," and "nutrition":

Very often → Often → Sometimes → Rarely → Never

Angioedema Control Test (AECT)[28,29]: a four-item questionnaire with a five-point response scale developed and validated to retrospectively quantify disease control and aid management decisions in patients with recurrent angioedema (AECT-4Wk — 4-week recall used):

0 → 1 → 2 → 3 → 4

Treatment Satisfaction Questionnaire for Medication (TSQM), version II[30]: an 11-item questionnaire with a seven-point response scale to gauge patients' satisfaction with "effectiveness," "side effects," "convenience," and "global satisfaction" of a medication:

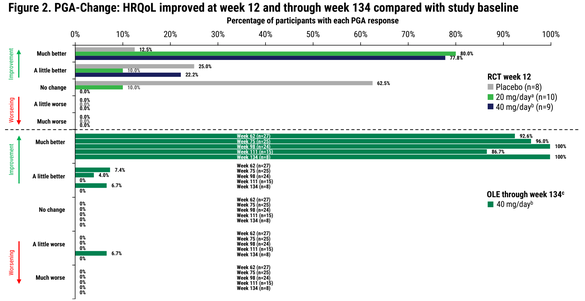
Extremely dissatisfied → Somewhat satisfied → Extremely satisfied

Results

- This analysis included all 30 participants who completed the Part 1 RCT and enrolled into the Part 2 OLE. Twenty-one participants were on study at the time of CHAPTER-1 study end, and all continued into the ongoing CHAPTER-4 OLE (NCT06679881)[20] in which deucrictibant extended-release (XR) tablet is self-administered. None of the 9 discontinuations in the CHAPTER-1 OLE were reported as treatment-related or associated with an adverse event.
  - Mean (SD) treatment duration in the OLE was 22.2 (8.1) months.
  - Maximum deucrictibant exposure during the entire study was 33.8 months.

Health-related quality of life using PGA-Change

Figure 2. PGA-Change: HRQoL improved at week 12 and through week 134 compared with study baseline

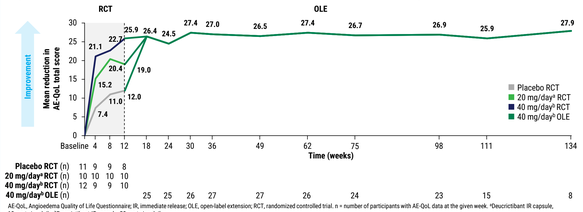


HRQoL, health-related quality of life; IR, immediate release; OLE, open-label extension; PGA-Change, Patient Global Assessment of Change; RCT, randomized controlled trial. n = number of participants with PGA-Change results at the given week. [a]Deucrictibant IR capsule, 10 mg twice daily. [b]Deucrictibant IR capsule, 20 mg twice daily. [c]Data shown for the final five visits of the OLE.

Results

Health-related quality of life using AE-QoL

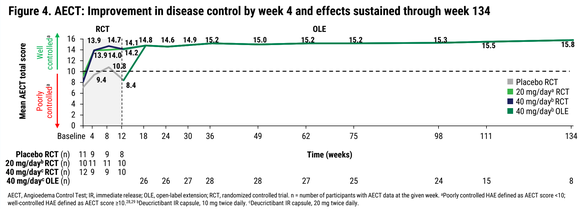
Figure 3. AE-QoL: Improvement in total score by week 4 and effects sustained through week 134



AE-QoL, Angioedema Quality of Life Questionnaire; IR, immediate release; OLE, open-label extension; RCT, randomized controlled trial. n = number of participants with AE-QoL data at the given week. [a]Deucrictibant IR capsule, 10 mg twice daily. [b]Deucrictibant IR capsule, 20 mg twice daily.

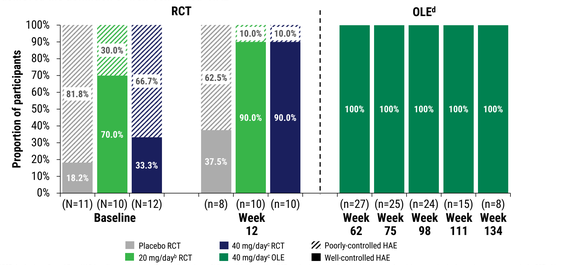
Disease control

Figure 4. AECT: Improvement in disease control by week 4 and effects sustained through week 134



AECT, Angioedema Control Test; IR, immediate release; OLE, open-label extension; RCT, randomized controlled trial. n = number of participants with AECT data at the given week. [a]Poorly controlled HAE defined as AECT score <10; well-controlled HAE defined as AECT score ≥10.[28,29] [b]Deucrictibant IR capsule, 10 mg twice daily. [c]Deucrictibant IR capsule, 20 mg twice daily.

Figure 5. AECT: 90% of participants at 12 weeks and 100% of participants at weeks 62–134 receiving deucrictibant achieved the definition of well-controlled[a] HAE

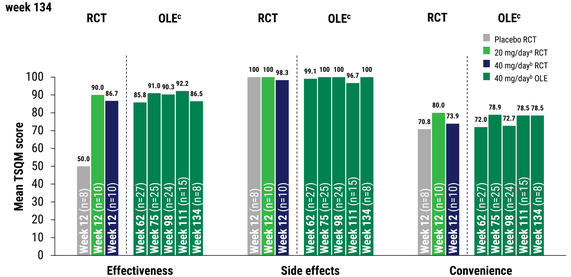


AECT, Angioedema Control Test; HAE, hereditary angioedema; IR, immediate release; OLE, open-label extension; RCT, randomized controlled trial. N = number of participants randomized to each treatment group in the RCT with AECT data. n = number of participants with AECT results at the given week. [a]Well-controlled HAE defined as AECT score ≥10.[28,29] [b]Deucrictibant IR capsule,10 mg twice daily. [c]Deucrictibant IR capsule, 20 mg twice daily. [d]Data are shown for the final five visits during the OLE.

Results

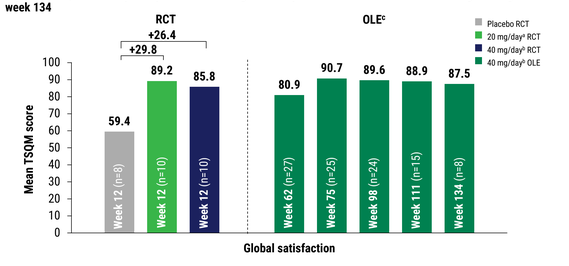
Treatment satisfaction

Figure 6. TSQM: Participant satisfaction with effectiveness greater vs placebo at week 12 and remained high through week 134



IR, immediate-release; OLE, open-label extension; RCT, randomized control trial; TSQM, Treatment Satisfaction Questionnaire for Medication. n = number of participants with TSQM results at the given week. [a]Deucrictibant IR capsule, 10 mg twice daily. [b]Deucrictibant IR capsule, 20 mg twice daily. [c]Data are shown for the final five visits during the OLE.

Figure 7. TSQM: Overall participant satisfaction greater vs placebo at week 12 and remained high through week 134



IR, immediate-release; OLE, open-label extension; RCT, randomized control trial; TSQM, Treatment Satisfaction Questionnaire for Medication. n = number of participants with TSQM results at the given week. [a]Deucrictibant IR capsule, 10 mg twice daily. [b]Deucrictibant IR capsule, 20 mg twice daily. [c]Data are shown for the final five visits during the OLE.

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COI: M.E.M.: AstraZeneca, Astria, BioCryst, Blueprint, Celldex, Cogent, CSL Behring, GSK, Ionis, Intellia, KalVista, Merck, Novartis, Pharming, Pharvaris, Regeneron, Takeda, Teva; **J.A.:** Astria, BioCryst, CSL Behring, Ionis, KalVista, Pharming, Pharvaris, Takeda; **F.A.:** BioCryst, CSL Behring, KalVista, Otsuka, Takeda; **M.C.:** BioCryst, CSL Behring, KalVista, Menarini, MSD, Novartis, Otsuka, Pharming, Pharvaris, Sobi, Takeda, UCB; **H.C.:** AstraZeneca (Alexion), CSL Behring, KalVista, Merck, Novartis, Pharming, Pharvaris, Roche, Sanofi, Sobi, Takeda; **N.C.:** BioCryst, CSL Vifor, GSK, Novartis, Pharming, Pharvaris, Takeda; **E.E.:** BioCryst, Dr. Falk Pharma, Novartis, Pharming, Pharvaris; **M.G.:** BioCryst, CSL Behring, Novartis; **S.G.:** Baxter, CSL Behring, Dyax, Grifols, Pharming/Swedish Orphan, Takeda, ViroPharma; **M.D.D.:** BioCryst, CSL Behring, Takeda; **P.G.:** BioCryst, CSL Behring, KalVista, Pharming, Takeda; **S.K-A:** BioCryst, Biotest, CSL Behring, Ionis, KalVista, Otsuka, Pharvaris, Takeda; **T.K.:** BioCryst, CSL Behring, KalVista, Otsuka, Pharvaris, Sanofi/Regeneron, Takeda; **M.M.:** Astria, BioCryst, CSL Behring, Intellia, KalVista, Novartis, Octapharma, Otsuka, Pharvaris, Takeda; **M.S.:** BioCryst, CSL Behring, KalVista, Pharming, Pharvaris, Takeda; **M.D.T.:** none; **A.V.:** AstraZeneca, Berlin-Chemie/Menarini Group, CSL Behring, KalVista, Novartis, Pharming, Pharvaris, Sobi, Takeda; **W.H.Y.:** Ammune Therapeutics, ALK Abello, Anaptysbio, Angioedema Centers of Reference and Excellence, Arrelela, Aslan, AstraZeneca, Astria, BioCryst, Blueprint, Bristol Myers, Celgene, Celldex, CSL Behring, DBV Technologies, Dermira, Eli Lilly, Escient, Gaidema, Genentech, GSK, Glenmark, Hälexo, Hereditary Angioedema Canada, Incyte, Intellia, Ionis, Merck, Moderna, Novartis, Novavax, Pharvaris, Pharming, Providence, RAPT Therapeutics, Regeneron, Roche, Sanofi, Stallergenes, Takeda, Upstream Bio, VBI; **A.Z.:** Astria, BioCryst, CSL Behring, KalVista, Otsuka, Pharming, Pharvaris, Takeda; **R.C.:** employee of RC Consultancy and consultant to Pharvaris, holds stocks in Pharvaris; **S.M.:** employee of Mulders Clinical Consulting and consultant to Pharvaris; holds stocks in Pharvaris; **J.L., U.F., U.K, P.L.:** employees of Pharvaris, holds stocks in Pharvaris; **J.K.:** employee of JCK Consult and consultant to Pharvaris; holds stocks/stock options in Pharvaris; **A.L.:** employee of GrayMatters Consulting; consultant to Pharvaris; holds stocks/stock options in Pharvaris; advisor to Kosa Pharma; **E.A-P:** Astria, BioCryst, BioMarin, CSL Behring, Intellia, KalVista, Pharming, Pharvaris, Takeda; **M.A.R.:** Astria, BioCryst, BioMarin, Celldex, CSL Behring, Cycle Pharma, Grifols, Intellia, Ionis, KalVista, Novartis, Pharming, Pharvaris, Sanofi-Regeneron, Takeda.
Acknowledgments: Medical writing support was provided by Jonny Turner, PhD, of Envision Spark, an Envision Medical Communications agency, a part of Envision Pharma Group, and funded by Pharvaris.

***CHAPTER-1 was a Pharvaris-sponsored clinical trial. ClinicalTrials.gov identifier: NCT05047185. The term injectable-like efficacy is a registered trademark of Pharvaris GmbH.**