

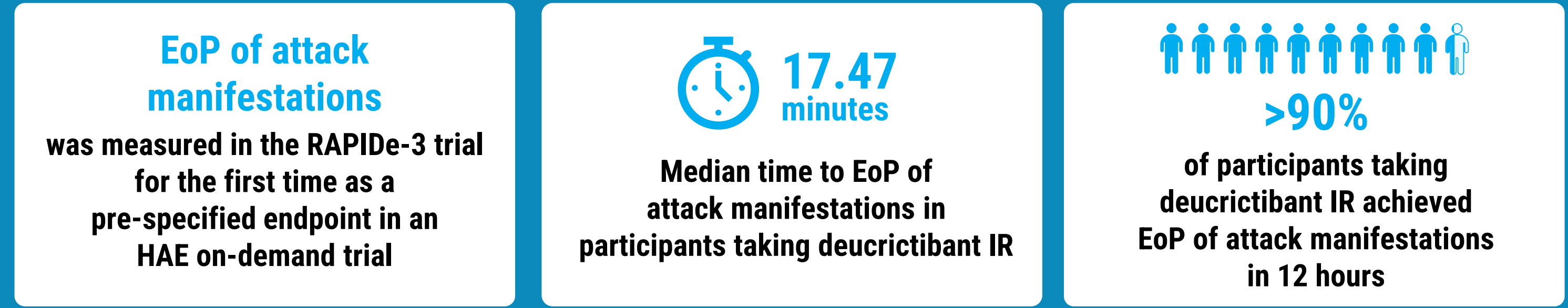
# End of Progression of Hereditary Angioedema Attacks With Oral Deucricitbant Immediate-Release Capsule: RAPIDE-3 Phase 3 Trial

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## Summary

The Phase 3 RAPIDE-3 trial for treatment of attacks in multiple types of hereditary angioedema (HAE) demonstrated that attacks treated with the bradykinin B2 receptor antagonist, deucricitbant immediate-release (IR) capsule, achieved end of progression (EoP) of attack manifestations faster than those treated with placebo.



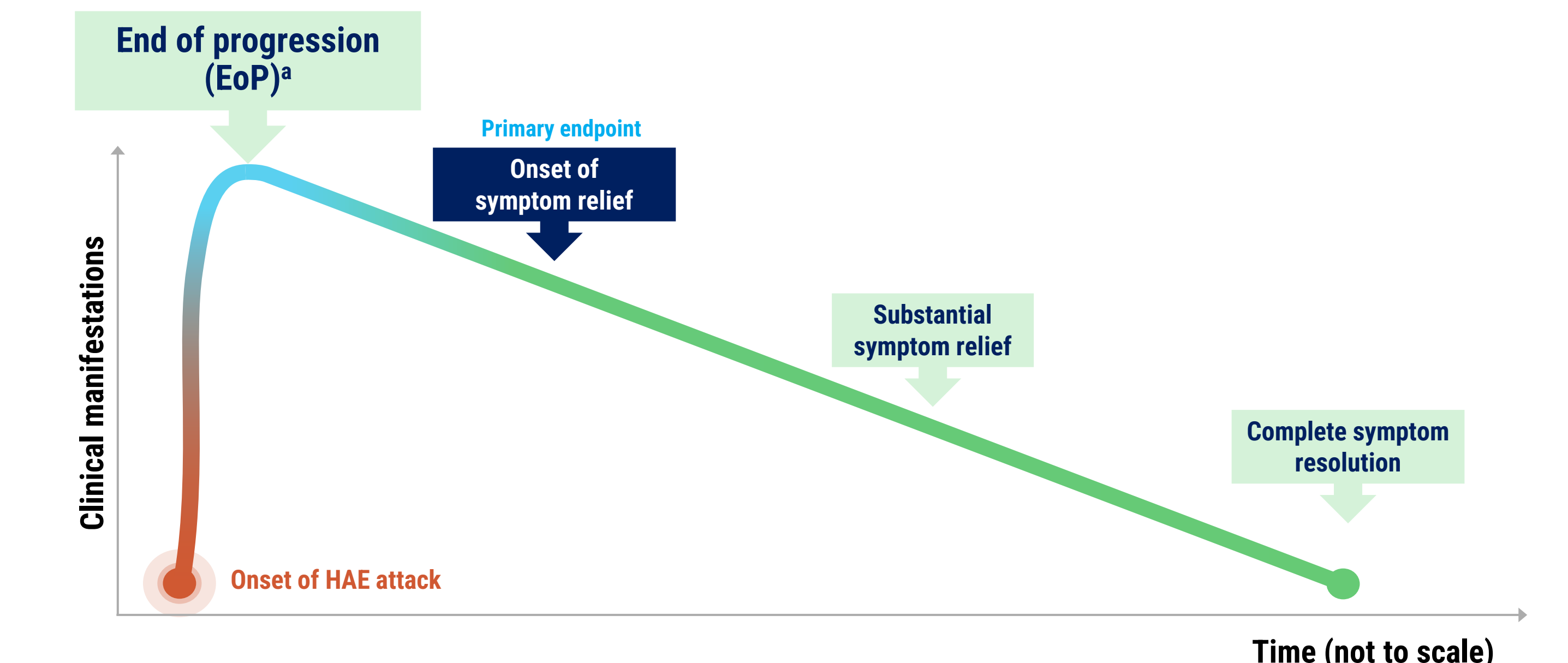
For complete information on efficacy and safety of deucricitbant IR in the RAPIDE-3 trial please see poster 57.

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

## Background

- Hereditary angioedema (HAE):** a condition characterized by excess bradykinin, which activates bradykinin B2 receptors causing increased fluid migration from the blood vessels to the surrounding tissues. HAE causes recurrent and unpredictable episodes of painful angioedema attacks affecting multiple locations in the body with varying degrees of severity.<sup>1</sup>
- Unmet need:** an unmet need remains for additional orally administered treatments combining ease of administration, rapid and sustained effects, and a well-tolerated safety profile.<sup>2-4</sup>
- End of progression (EoP):** defined as the earliest post-treatment timepoint after which attack manifestations stop worsening further, which marks the earliest evidence of treatment effects.<sup>2</sup>
  - It may serve as a clinically meaningful indicator of attacks starting to evolve to relief and resolution.<sup>2</sup>
  - Achieving EoP can also offer psychological reassurance by reducing the uncertainty associated with HAE attack escalation.
- Time to EoP as an outcome to measure treatment efficacy:** was recommended for inclusion by the Acute Treatment Outcomes in Hereditary Angioedema (AURORA) consensus project.
  - The AURORA project brought together patients, clinicians, researchers, industry representatives, and regulatory stakeholders to develop a set of core outcomes recommended for inclusion in clinical trials of on-demand treatments for HAE attacks.<sup>2</sup>
  - 95% of participants agreed that time to EoP should be included as one of the five core outcomes as it represented the earliest sign of treatment effects.<sup>2</sup>
- Oral deucricitbant:** a selective bradykinin B2 receptor antagonist under development for both prophylactic and on-demand treatment of bradykinin-mediated angioedema attacks.<sup>5-14</sup>

Figure 1: Evolution of an HAE attack



HAE, hereditary angioedema; PGI-C, Patient Global Impression of Change. <sup>a</sup>In RAPIDE-3, EoP was defined as the earliest post-treatment timepoint after which all subsequent PGI-C ratings were stable or improved within 12 hours.

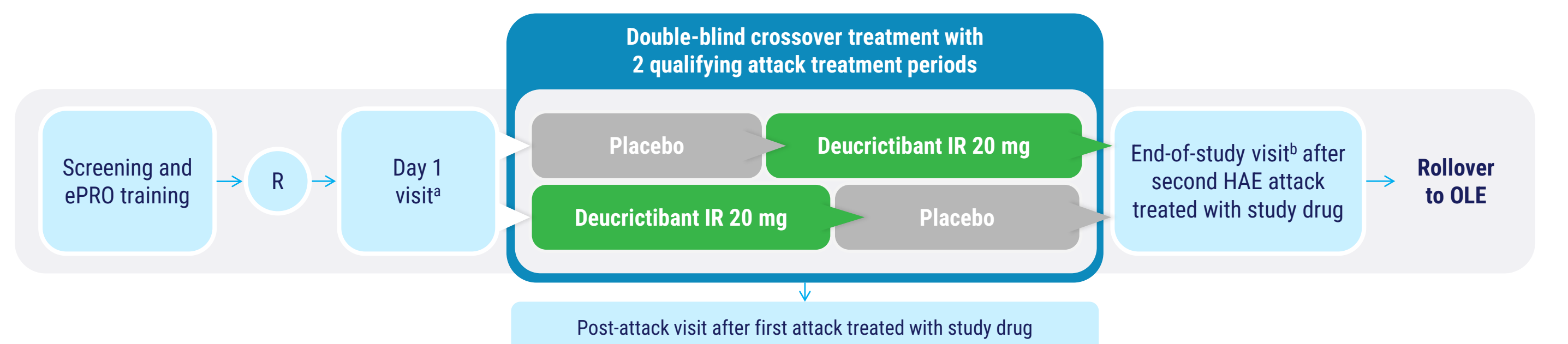
## Objective

To evaluate the time to EoP of attack manifestations as a pre-specified outcome aimed to document initial or earliest clinical evidence of acute attack manifestations stopping to worsen and starting to evolve towards relief and resolution following on-demand treatment with deucricitbant IR versus placebo in adolescents and adults with HAE.

## Methods

- RAPIDE-3 (NCT06343779)\*:** a global, Phase 3, randomized, double-blind, placebo-controlled, crossover trial.
- Participants:** adolescents (aged  $\geq 12$  to  $< 18$  years) and adults (aged  $\geq 18$  to  $\leq 75$  years) with HAE-C1INH Type 1 or 2, or HAE with normal C1 inhibitor (HAE-nC1INH). Participants on long-term HAE prophylaxis were also enrolled.
- Study drugs:** participants self-administered deucricitbant IR capsule 20 mg or placebo to treat two qualifying attacks in a crossover design. Qualifying attacks included non-laryngeal or non-severe laryngeal attacks presenting without breathing difficulties or stridor, and with at least one symptom item score of  $\geq 2$  on the Angioedema Symptom Rating Scale (AMRA) assessment.
- Analysis set:** primary efficacy analysis included all randomized participants who had two attacks treated with study drug.

Figure 2: RAPIDE-3 trial design



ePRO, electronic patient-reported outcome; HAE, hereditary angioedema; IR, immediate-release; OLE, open-label extension; R, randomization. RAPIDE-3, ClinicalTrials.gov identifier: NCT06343779. <sup>\*</sup>https://www.clinicaltrials.gov/study/NCT06343779. Accessed March 4, 2026. <sup>a</sup>Adolescent participants received a non-attack dose for pharmacokinetic sampling at Day 1 visit prior to randomization. <sup>b</sup>Data from end-of-study visit could be used to qualify the participant for an open-label extension study with deucricitbant.

**COI:** M.A.R.: Astra, BioCryst, BioMarin, Cellnex, CSL Behring, Cycle Pharma, Grifols, Intellia, Ionis, KalVista, Novartis, Pharming, Pharvaris, Sanofi-Regeneron, Takeda; D.M.C.: Astra, BioCryst, CSL Behring, Ionis, Intellia, KalVista, Otsuka, Pharvaris, Takeda; P.H.L.: Astra, BioCryst, CSL Behring, KalVista, Novartis, Pharvaris, Takeda; A.A.: Astra, BioCryst, CSL Behring, Intellia, Ionis, KalVista, Octapharma, Pharvaris, Takeda; M.C.: BioCryst, CSL Behring, KalVista, Menarini, MSD, Novartis, Otsuka, Pharming, Pharvaris, Sobli, Takeda, UCB; M.Sto.: BioCryst, CSL Behring, KalVista, Pharming, Pharvaris, Takeda; A.V.: AstraZeneca, Berlin-Chemie/Menarini Group, CSL Behring, KalVista, Novartis, Pharming, Pharvaris, Sobli, Takeda; A.S.G.: AstraZeneca, Astra, Biomarin, Brazilian research Entity (CNPq), Catalyst, CSL Behring, Exeltis, KalVista, Kedron, Multicare, Pharvaris, Pint-Pharma, Takeda, The Binding Site; W.R.L.: AstraZeneca, Astra, BioCryst, BioMarin, CSL Behring, Fresenius-Kabi, Grifols, GSK, Intellia, Ionis, KalVista, Magellan, Optinose, Pharming, Pharvaris, Regeneron, Sanofi, Takeda, Teva; D.F.S.: BioCryst, CSL Behring, Intellia, Ionis, KalVista, Pharming, Pharvaris, Takeda; N.B.: None; N.L.F.: Bago, CSL Behring, Pint Pharma, Sanofi, Takeda, Director of HAE committee for AAACeC; R.H.: BioCryst, CSL Behring, KalVista, Pharvaris, Pharming, Takeda; H.R.K.: Astra, BioCryst, CSL Behring, KalVista, Pharvaris, Takeda; G.K.: CSL Behring, Er-Kim Ilaç, Ionis, Pharvaris, Poifarma, Takeda, Viem Ilaç; B.K.: Pharvaris; H.H.L.: BioCryst, CSL Behring, Intellia, Ionis, KalVista, Pharming, Pharvaris, Takeda; Medical Advisory Board: US HAE, J.P.: Pharming, Takeda; A.R.: BioCryst, CSL Behring, Deutsche Forschungsgemeinschaft (DFG), EUROIMMUN Medizinische Labordiagnostika AG, Novartis, Otsuka, Pharming, Pharvaris, Pierre Fabre Pharma, Stallergenes, Swedish Orphan Biovitrum, Takeda; R.T.: ADMA, Astra, BioCryst, CSL Behring, Intellia, Ionis, KalVista, Pharvaris, Takeda; Speaker presentations: ARS, AstraZeneca, BioCryst, CSL Behring, Grifols, GSK, Ionis, KalVista, Lilly, Novartis, Pharming, Sanofi/Regeneron, Takeda; P.T.: Speaker/consultancy fees from CSL Behring, KalVista, BioCryst, AbbVie, Takeda; A.Z.: Astra, BioCryst, CSL Behring, Intellia, Ionis, KalVista, Pharming, Pharvaris, Takeda; J.A.: Astra, BioCryst, CSL Behring, Intellia, Ionis, KalVista, Pharming, Pharvaris, Takeda; T.J.C.: ADARx, Astra, BioCryst, BioMarin, CSL Behring, GlaxoSmithKline, Grifols, Intellia, Ionis, KalVista, Pharvaris, Takeda, Director of ACARE International Hereditary Angioedema Center, member of the Medical Advisory Board for the HAE-A; H.F.: Astra, BioCryst, CSL Behring, Intellia, Ionis, KalVista, ONO Pharmaceutical, Pharming, Pharvaris, Shire/Takeda; F.G.: BioCryst, CSL Behring, KalVista, Takeda; P.G.B.: CSL Behring, Pharvaris, Pint Pharma, Takeda, World Allergy Organization, Associação Brasileira de Alergia e Imunologia; S.K.: nothing to disclose; T.K.: Astra, BioCryst, CSL Behring, KalVista, Otsuka, Pharvaris, Sanofi/Regeneron, Takeda; L.M.S.: BioCryst, CSL Behring, KalVista, Pharming, Pharvaris, Octapharma, Takeda; F.P.: BioCryst, CSL Behring, Otsuka, Pharvaris, Takeda; K.V.S.: Achieve Life Sciences, ADARx, AstraZeneca, Astra, Bellus, BioCryst, CSL Behring, Evidera, GlaxoSmithKline, Jasper, KalVista, Nociun, Novartis, Pharvaris, Teva; M.Sta.: None; H.J.W.: BioCryst, BioMarin, CSL Behring, Genentech, GSK, Takeda; R.H.Z.-U.: BioCryst, KalVista, Pharming, Takeda; R.D.Z.: Astra, BioCryst, CSL Behring, KalVista, Novartis, Panalab, Pharvaris, Pint-Pharma, Sanofi, Takeda; A.G.: Pharvaris; F.A.: BioCryst, CSL Behring, KalVista, Otsuka, Takeda; E.A.-P.: Astra, BioCryst, BioMarin, CSL Behring, Intellia, KalVista, Otsuka, Pharming, Pharvaris, Takeda; A.P.B.: KalVista, Pharming, Takeda; M.H.: Astra, BioCryst, CSL Behring, Kaken, KalVista, Otsuka, Pharvaris, Takeda, Torii; D.J.H.: KalVista, Pharvaris; E.L.: BioCryst, CSL Behring, Kao Corporation, Karvita Japan, Pharvaris, Takeda, Torii Pharmaceutical; J.S.J.: Astra, BioCryst, CSL Behring, Cycle Pharma, Intellia, Ionis, KalVista, Pharming, Pharvaris, Takeda; C.H.K.: CSL Behring, Takeda; L.L.: BioCryst, CSL Behring, Novartis, Takeda; R.L.: BioCryst, CSL Behring, Ionis, KalVista, Novartis, Pharming, Pharvaris, Takeda; M.M.: Astra, BioCryst, CSL Behring, Intellia, KalVista, Novartis, Octapharma, Otsuka, Pharvaris; M.E.M.: AstraZeneca, Astra, BioCryst, Blueprint, Cellnex, Cogent, CSL Behring, GSK, Ionis, Intellia, KalVista, Merck, Novartis, Pharming, Pharvaris, Regeneron, Takeda, Teva; C.J.R.: Amgen, GSK, Pfizer, Pharvaris, Sanofi, Takeda; J.L., L.Z., J.M., U.K., G.G., M.Y., P.L.: employees of Pharvaris and holds stock in Pharvaris; R.C.: employee of RC Consultancy and consultant to Pharvaris; A.L.: employee of GrayMatters Consulting and consultant to Pharvaris, holds stocks/stock options in Pharvaris; advisor to Kosa Pharma.

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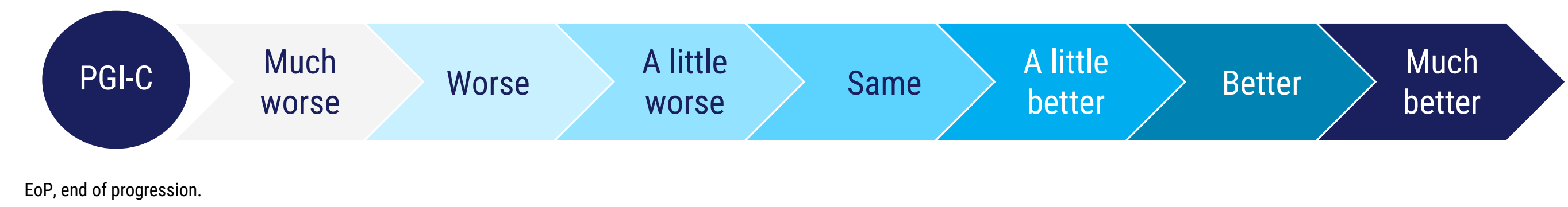
Table 1. Assessment of time to EoP of attack manifestations

Parameter	Details
<b>Time to EoP of attack manifestations</b>	The time to the earliest post-treatment timepoint after which all subsequent Patient Global Impression of Change (PGI-C) scale ratings were stable or improved within 12 hours
<b>Instrument</b>	PGI-C
<b>Type of analysis</b>	Pre-specified secondary endpoint (5th in the hierarchical testing order) <sup>8</sup>
<b>Window for endpoint assessment</b>	Baseline to 12 (+1) hours

EoP, end of progression.

Figure 3: Scale used to assess time to EoP of attack manifestations

**Patient Global Impression of Change (PGI-C)<sup>15</sup>:** a tool that uses a seven-point Likert response scale to assess the change in HAE attack manifestations since starting study treatment compared with pre-treatment.



## Results

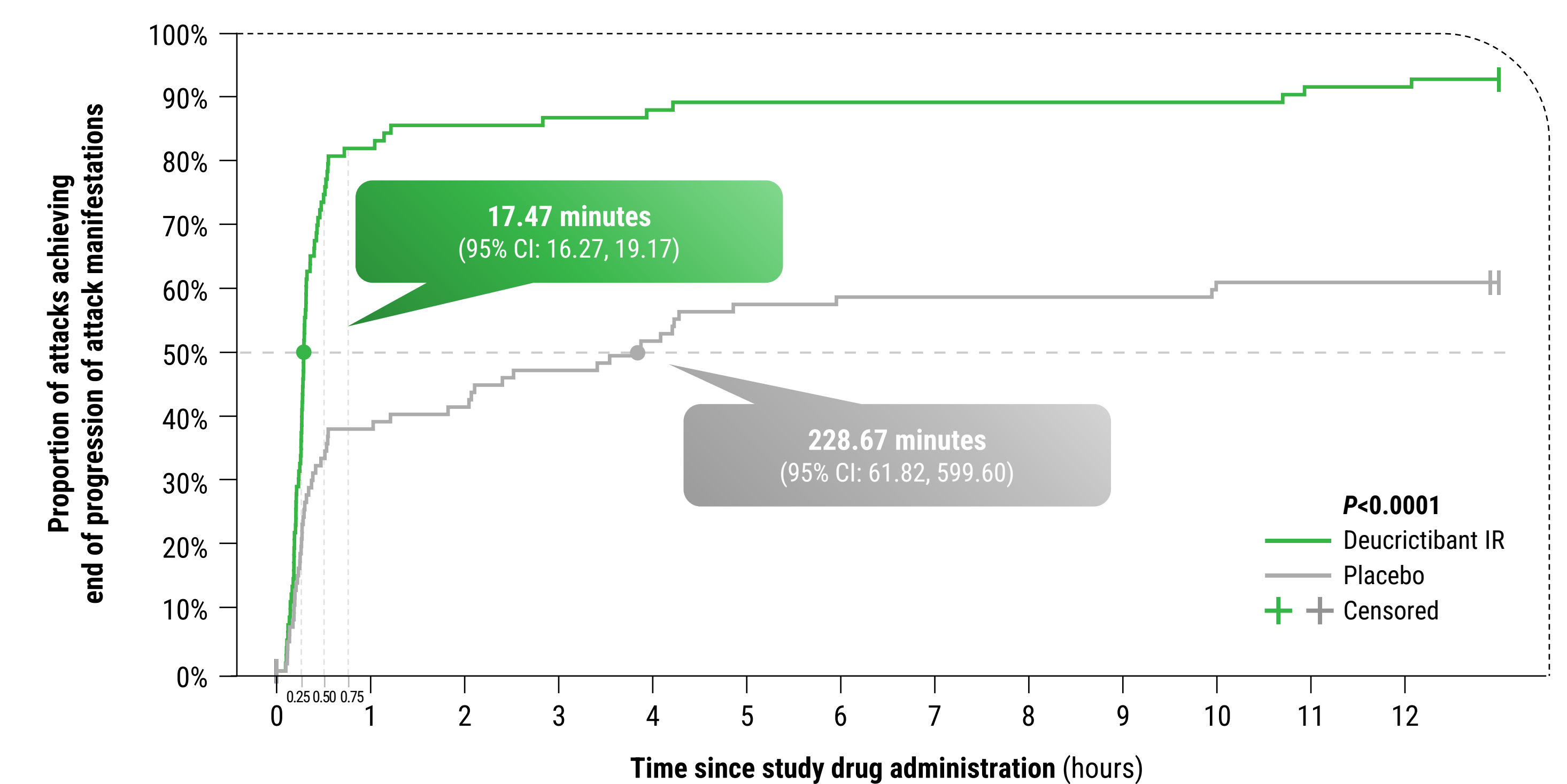
- A total of 134 eligible participants (10 [7.5%] adolescents, 4 [3.0%] with HAE-nC1INH) were enrolled and randomized at 59 sites across 24 countries on 6 continents.
- The primary efficacy analysis set included 88 participants with paired attacks; 113 participants had  $\geq 1$  attack treated with study drug.

Table 2. Participant baseline demographics and disease characteristics

Participant characteristics	All randomized participants (N=134)
<b>Age in years, mean (SD)</b>	39.0 (14.7)
<b>Sex: Female, n (%)</b>	76 (56.7)
<b>Years since HAE diagnosis, mean (SD)</b>	17.7 (13.0)
<b>Number of attacks within 3 months before screening, mean (SD)</b>	4.4 (3.3)
<b>HAE type, n (%)</b>	
HAE-C1INH-Type 1	118 (88.1)
HAE-C1INH-Type 2	10 (7.5)
Unspecified Type 1 or 2	2 (1.5)
HAE-nC1INH <sup>a</sup>	4 (3.0)
<b>Current long-term prophylaxis use, n (%)<sup>b</sup></b>	31 (23.1)

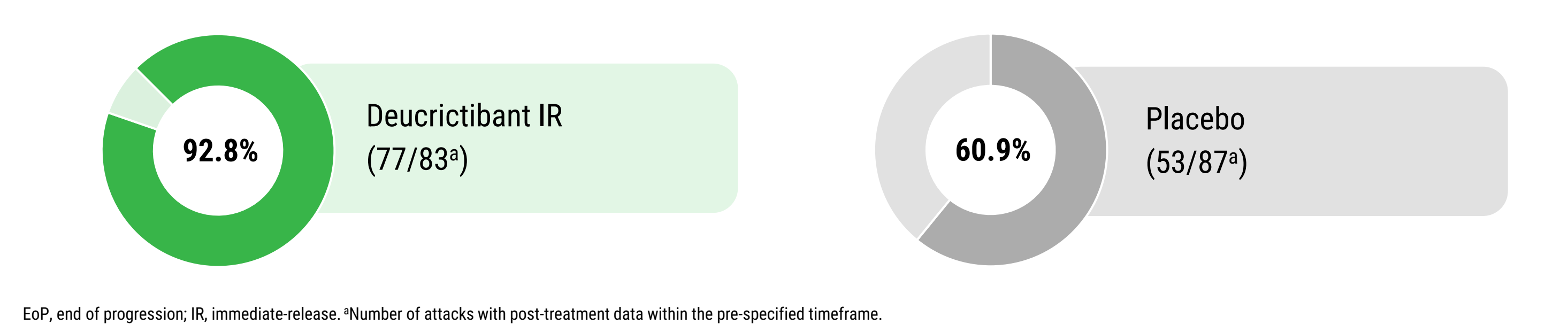
HAE-C1INH-Type 1, hereditary angioedema type 1; HAE-C1INH-Type 2, hereditary angioedema type 2; HAE-nC1INH, hereditary angioedema with normal C1 inhibitor; SD, standard deviation. <sup>a</sup>Included participants with HAE-nC1INH associated with a documented genetic variant. <sup>b</sup>Long-term prophylaxis medication included: lanadelumab (13 [9.7%]), berotralstat (8 [6.0%]), complement C1 esterase inhibitor (6 [4.5%]), and other (4 [3.0%]).

Figure 4: EoP of attack manifestations was achieved significantly faster with deucricitbant IR than with placebo<sup>a,b</sup>



CI, confidence interval; EoP, end of progression; IR, immediate-release; PGI-C, Patient Global Impression of Change. <sup>a</sup>If the event of interest was not achieved within the prespecified timeframe or rescue medication was used, the attack was right censored at the last observation before the upper end of the data entry window. <sup>b</sup>Time to EoP of attack manifestations was the earliest post-treatment timepoint after which all subsequent PGI-C ratings were stable or improved.

Figure 5: Proportion of attacks achieving EoP of attack manifestations by 12 hours



EoP, end of progression; IR, immediate-release. <sup>a</sup>Number of attacks with post-treatment data within the pre-specified timeframe.

## References

- Busse PJ, et al. *N Engl J Med*. 2020;382:1136-48.
- Petersen RS, et al. *J Allergy Clin Immunol Pract*. 2024;12(6):1614-21.
- Betschel SD, et al. *Allergy Asthma Clin Immunol*. 2025;21:25.
- Valerieva A, et al. *Clin Transl Allergy*. 2024;14:e12391.
- RAPIDE-1 <https://www.clinicaltrials.gov/study/NCT04618211>. Accessed March 11, 2026.
- Maurer M, et al. *Lancet Haem*. 2026; In press.
- RAPIDE-2 <https://clinicaltrials.gov/study/NCT05396105>. Accessed March 11, 2026.
- RAPIDE-3 <https://www.clinicaltrials.gov/study/NCT06343779>. Accessed March 11, 2026.
- CHAPTER 1. <https://www.clinicaltrials.gov/study/NCT05047185>. Accessed March 11, 2026.
- CHAPTER 10. <https://www.clinicaltrials.gov/study/NCT05047185>. Accessed March 11, 2026.
- CHAPTER 3. <https://clinicaltrials.gov/study/NCT06669754>. Accessed March 11, 2026.
- CHAPTER 4. <https://clinicaltrials.gov/study/NCT06669754>. Accessed March 11, 2026.
- CHAPTER 12. <https://clinicaltrials.gov/study/NCT06669754>. Accessed February 5, 2026.
- CREATE. <https://clinicaltrials.gov/study/NCT07266805>. Accessed March 11, 2026.
- Covella B, et al. *Future Pharmacol*. 2024;4(1):41-53.
- Cohn DM, et al. *Clin Transl Allergy* 2023;13(9):e12288.