

Burden of Injectable On-Demand Treatment for Hereditary Angioedema Attacks in Adolescents

Mauro Cancian¹, Paula Busse², Tariq El-Shanawany³, Maeve O'Connor^{4,5}, Sinisa Savic⁶, Paola Triggianese⁷, Patrick Yong⁸, Andrea Zanichelli^{9,10}, Sherry Danese¹¹, Julie Ulloa¹¹, Vibha Desai¹², Paul Audhya¹², Sandra Christiansen¹³

¹Azienda Ospedale Università di Padova, Padova, Italy; ²The Mount Sinai Hospital, New York, NY, USA; ³University Hospital of Wales, Cardiff, Wales, United Kingdom; ⁴Integrative Allergy & Immunology Care Charlotte, NC, USA; ⁵Allergy, Asthma, & Immunology Research Institute, Charlotte, NC, USA; ⁶The Leeds Institute of Rheumatic and Musculoskeletal Medicine, University of Leeds, Leeds, United Kingdom; ⁷Azienda Ospedaliera Universitaria; Salerno, Italy; ⁸Frimley Health NHS Foundation Trust, Frimley, United Kingdom; ⁹Operative Unit of Medicine, Angioedema Center, IRCCS Policlinico San Donato, San Donato Milanese, Milan, Italy; ¹⁰Department of Biomedical Sciences for Health, University of Milan, Milan, Italy; ¹¹Outcomes Insights, Agoura Hills, CA, USA; ¹²KalVista Pharmaceuticals, Salisbury, United Kingdom, and Cambridge, MA, USA; ¹³University of California San Diego, La Jolla, CA, USA

Introduction

- Hereditary angioedema (HAE) is characterized by recurrent and unpredictable episodes of subcutaneous or submucosal swelling, which are debilitating and potentially fatal
- Treatment guidelines recommend the early use of on-demand treatment following the attack recognition to reduce morbidity and prevent mortality¹⁻³
 - Currently available on-demand treatments for HAE attacks are administered subcutaneously or intravenously²
- The onset of HAE symptoms typically occurs during childhood and may intensify significantly during puberty¹⁻³
 - Consequently, adolescents with HAE may face a substantial burden
- The current analysis examined the burden of HAE attacks in adolescent patients

Methods

- Participants with Type 1 or 2 HAE who were 12-17 years old and had treated at least one HAE attack within the prior three months with an approved on-demand therapy were included in this analysis
- Respondents were recruited by patient advocacy groups (HAEA, HAE UK, AMSAO) from the USA, UK, and France, respectively, and a physician association (ITACA) from Italy to complete an online survey
- The survey was self-reported and took respondents approximately 20 minutes to complete
- Participants were asked to rate their anxiety about using on-demand treatment during their last attack on a scale of “0 “not anxious” to 10 “extremely anxious”
- Respondents provided consent for their data to be used anonymously or in aggregate

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Disclosures

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Results

Table 1. Respondent Characteristics

	Total (n = 31)	On-Demand Only (n = 11)	On-Demand + Long-Term Prophylaxis (n = 20)
Current Mean Age, Years (SD)	14.3 (1.6)	14.4 (1.4)	14.3 (1.7)
Gender			
Male	61.3%	54.5%	65.0%
Female	38.7%	45.5%	35.0%
HAE Type			
Type 1	87.1%	90.9%	85.0%
Type 2	12.9%	9.1%	15.0%
Comorbidities			
Anxiety	22.6%	27.3%	20.0%
Asthma	16.1%	18.2%	15.0%
Depression	6.5%	9.1%	5.0%
Liver Disease	6.5%	0%	10.0%
None of the above	64.5%	72.7%	60.0%
Country			
United States	45.2%	54.5%	40.0%
Italy	45.2%	45.5%	45.0%
France	3.2%	0%	5.0%
United Kingdom	6.5%	0%	10.0%

Figure 1. Long-Term Prophylaxis at Time of Last Treated Attack (n = 20)

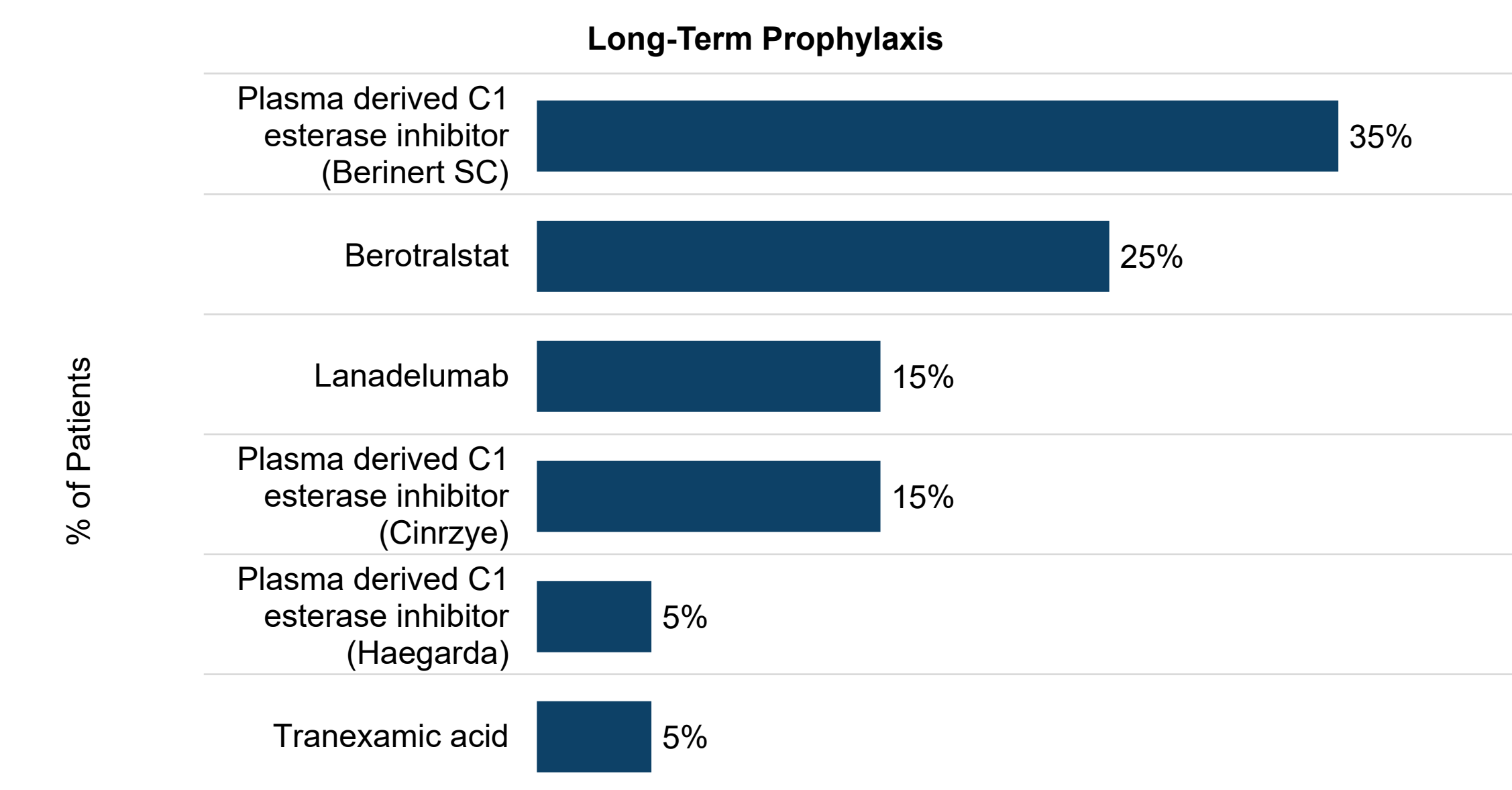
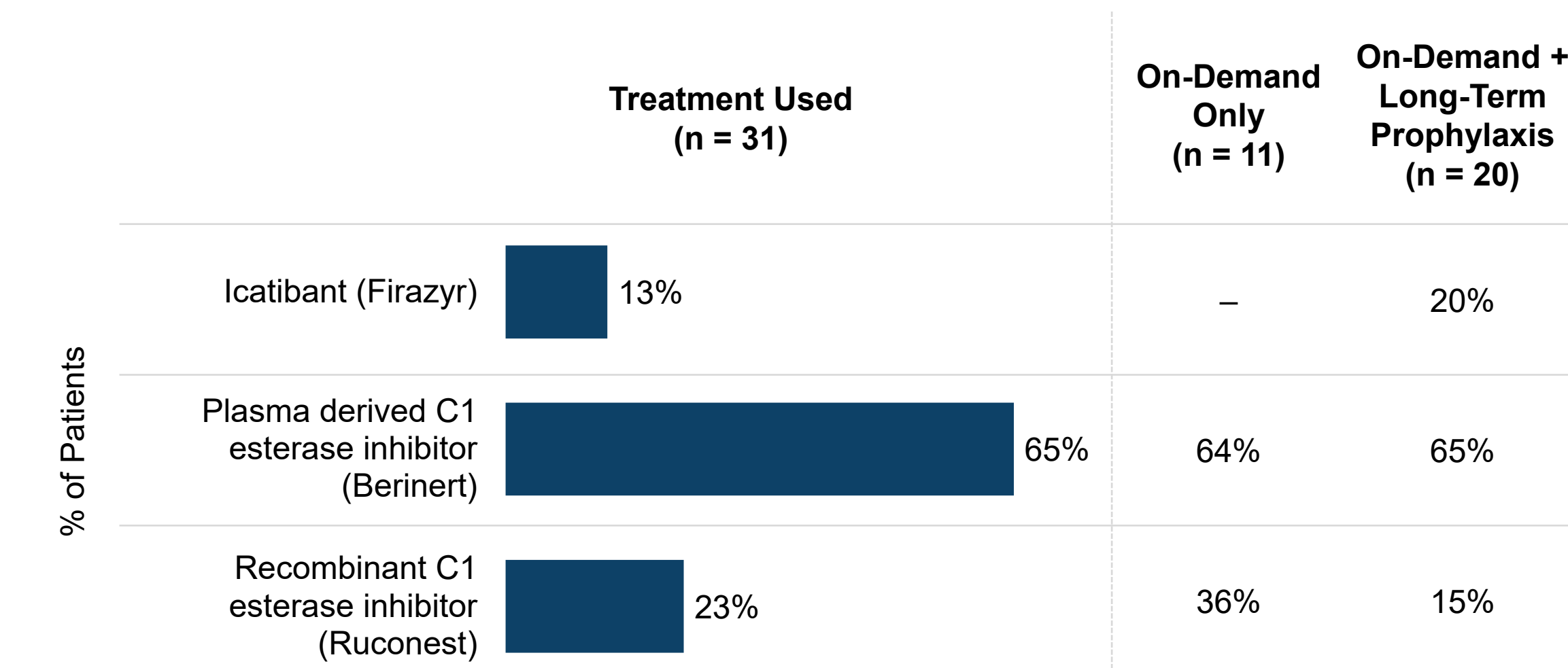
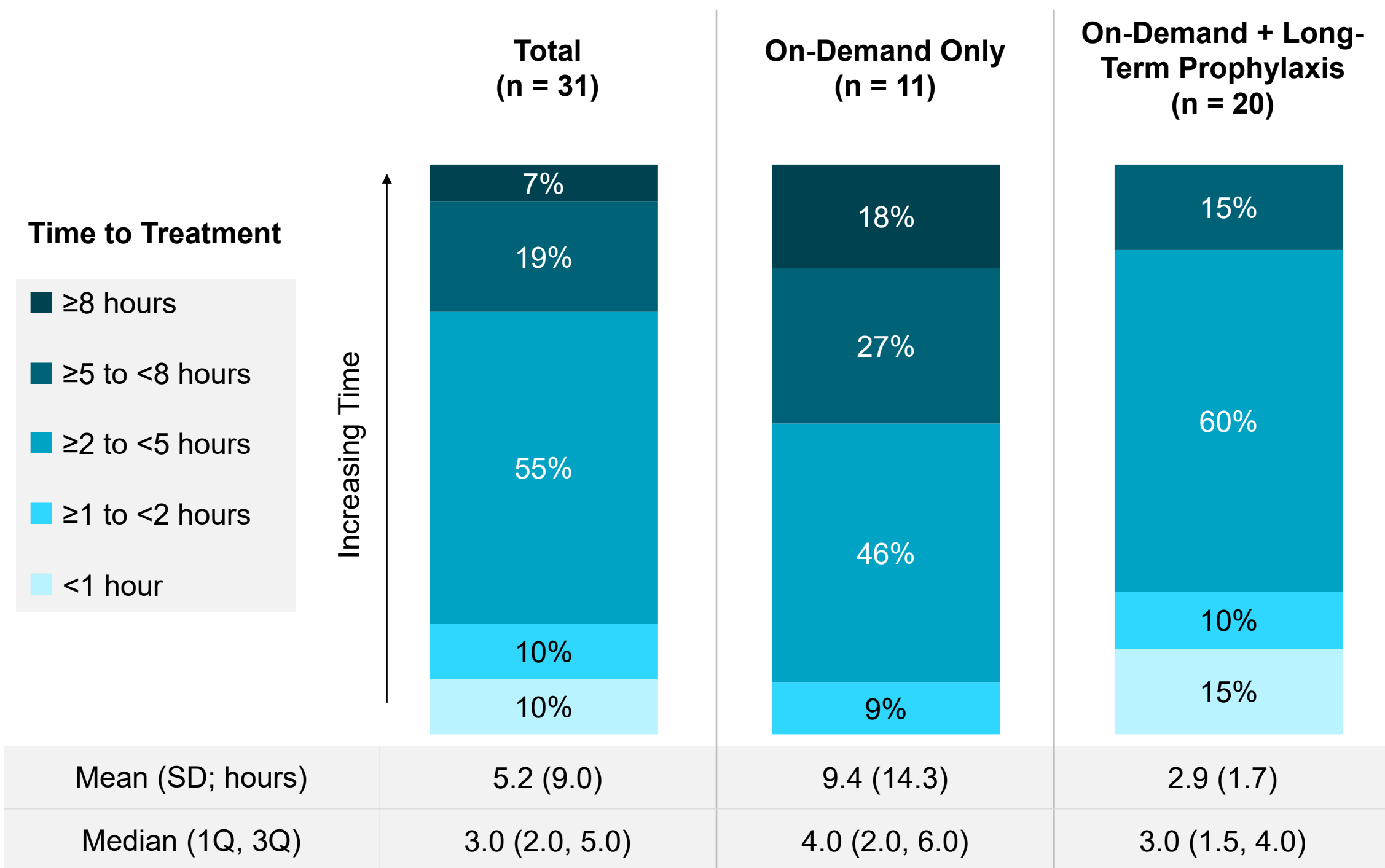


Figure 2. On-Demand Therapy Used for Last Treated Attack



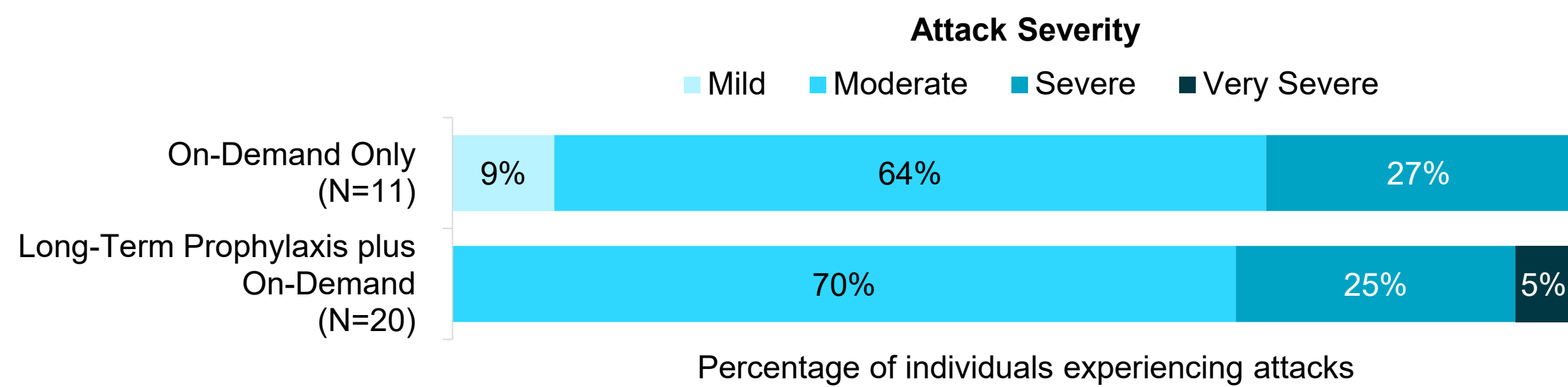
- The most commonly used on-demand treatment was plasma derived C1 esterase inhibitor (Berinert) for both the on-demand-only group (64%) and the on-demand plus long-term prophylaxis group (65%) (Figure 2)
- IV therapies were more common than SC in adolescents

Figure 3. Time to On-Demand Treatment



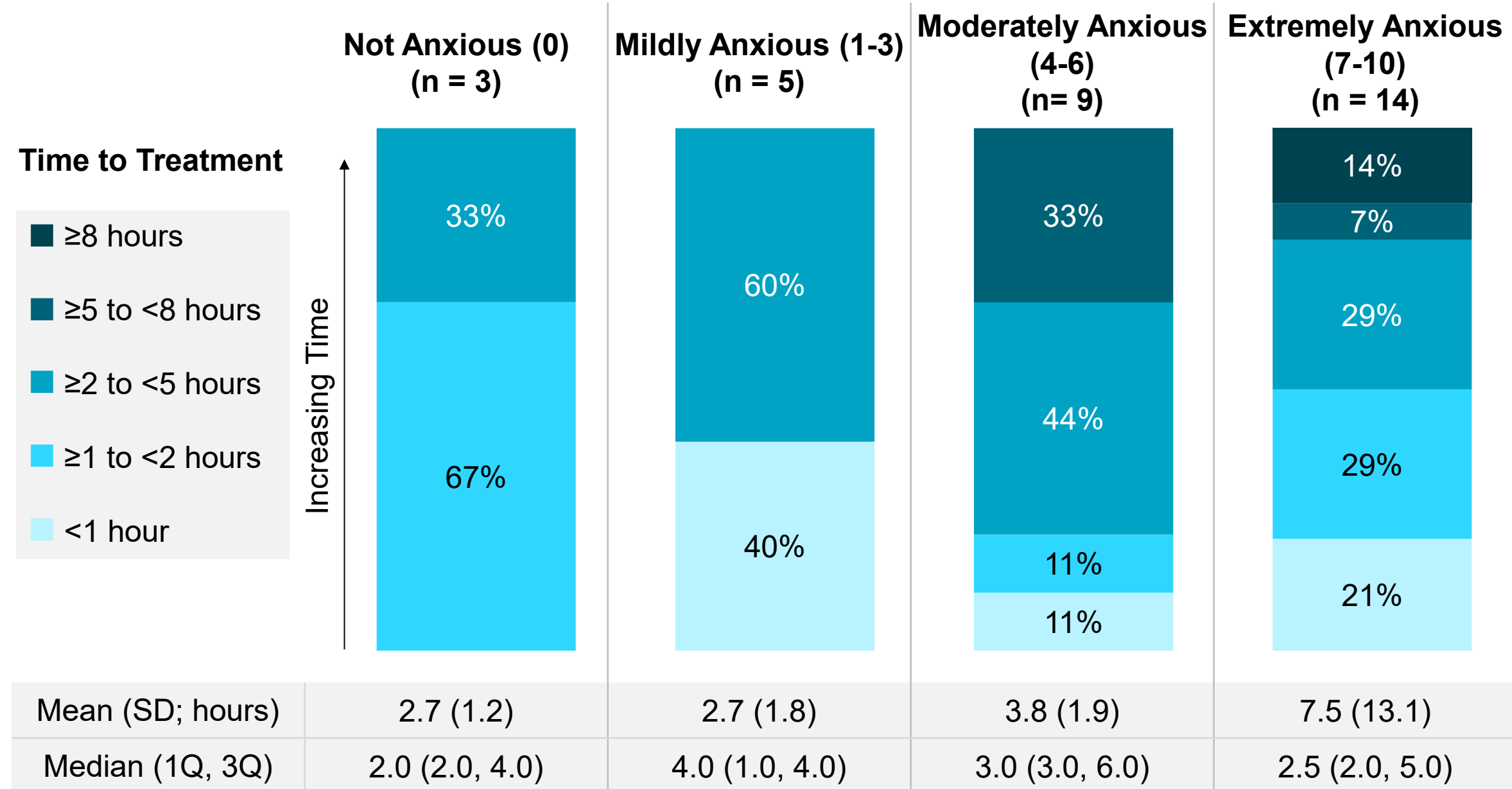
- Mean time to on-demand treatment was less for On-Demand + LTP respondents than On-Demand Only (Figure 3)
- 10% of respondents treated in <1 hour

Figure 4. Attack Severity at the Time of Treatment



- At the time of treatment, 68% (21/31) of attacks had progressed to moderate and 29% (9/31) to severe/very severe
- 26% (8/31) required a hospital/ER visit for treatment of their last attack

Figure 5. Time to On-Demand Treatment by Level of Treatment-Related Anxiety



- 45% (14/31) of respondents were extremely anxious about treating their last attack with on-demand treatment (Figure 5)
- Median time to treatment was 2 hours for those who were not anxious and 2.5 to 4 hours for those who were anxious

Conclusions

- Most adolescents delayed treatment of their last HAE attack (mean 5.2 hours), after attacks had progressed in severity
- Treatment-related anxiety was correlated with increased time to treatment
- Effective alternatives to parenteral on-demand treatments may reduce attack morbidity in adolescents with HAE

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