

# Emicizumab Prophylaxis in Paediatric Persons with Haemophilia A (PwHA) with Inhibitors: Impact on Health-Related Outcomes and Caregiver Burden in the HAVEN 2 Study

Maria Elisa Mancuso,<sup>1</sup> Johnny N. Mahlangu,<sup>2</sup> Robert Sidonio,<sup>3</sup> Peter Trask,<sup>4</sup>  
Sylvia von Mackensen,<sup>5</sup> Midori Shima,<sup>6</sup> Marianne Uguen,<sup>7</sup> Tiffany Chang,<sup>4</sup>  
Guy Young,<sup>8</sup> Johannes Oldenburg<sup>9</sup>

<sup>1</sup>Angelo Bianchi Bonomi Hemophilia and Thrombosis Center, Fondazione IRCCS Ca' Granda, Ospedale Maggiore Policlinico, Milan, Italy;

<sup>2</sup>Haemophilia Comprehensive Care Centre, Faculty of Health Sciences, University of the Witwatersrand and NHLS, Johannesburg, South Africa;

<sup>3</sup>Emory University and Children's Healthcare of Atlanta, Atlanta, GA, USA; <sup>4</sup>Genentech, Inc., South San Francisco, CA, USA; <sup>5</sup>University Medical Centre Hamburg-Eppendorf, Hamburg, Germany; <sup>6</sup>Nara Medical University, Department of Pediatrics, Kashihara, Japan; <sup>7</sup>F. Hoffmann-La Roche Ltd, Basel, Switzerland;

<sup>8</sup>Children's Hospital Los Angeles, University of Southern California Keck School of Medicine, Los Angeles, CA, USA; <sup>9</sup>Universitätsklinikum Bonn, Bonn, Germany

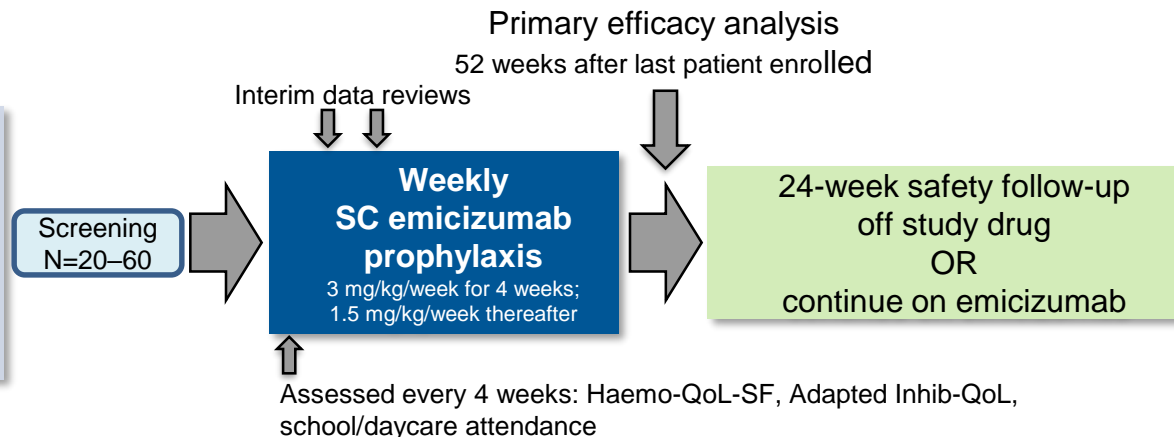
## Disclosures for Maria Elisa Mancuso

<b>Consultant</b>	<b>Bayer HealthCare, CSL Behring, Kedrion, Novo Nordisk, Pfizer, Roche, Sobi/Biogen</b>
<b>Speaker bureaus</b>	<b>Bayer HealthCare, Baxalta/Shire, CSL Behring, Novo Nordisk, Octapharma, Pfizer, Sobi/Biogen</b>
<b>Employee, shareholder, grant/research support, paid instructor, etc</b>	<b>No relevant conflicts of interest to declare</b>

# HAVEN 2

## Phase 3, Single-Arm, Multicentre, International, Open-label Study

- Paediatric PwHA with inhibitors aged  $\geq 2$  to  $< 12$  years (or 12–17 years if  $< 40$  kg) on episodic or prophylactic treatment with BPAs\*
- Enrolment at age  $< 2$  years permitted after interim analysis



- Emicizumab: humanised bispecific antibody restores missing activated factor VIII (FVIIIa) function by bridging FIXa and FXa
  - Approved in the United States (HEMLIBRA®) for prophylaxis in adult/paediatric PwHA with FVIII inhibitors
  - Committee for Medicinal Products for Human Use recommends EU approval for prophylactic treatment of PwHA with FVIII inhibitors
  - Ongoing clinical studies in PwHA with/without inhibitors
- At data cut-off of 8 May 2017:
  - 60 patients were enrolled†
  - In 23 patients aged  $< 12$  years on emicizumab prophylaxis for  $\geq 12$  weeks‡:
    - Annualised treated bleed rate: 0.2
    - Proportion with zero treated bleeds: 87%

# HAVEN 2

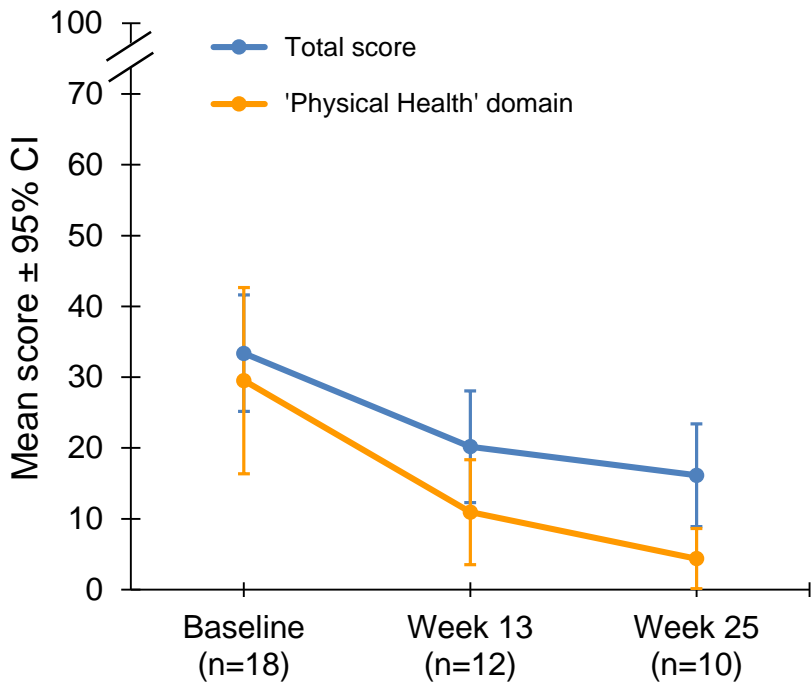
## Demographics and Baseline Characteristics

	Emicizumab 1.5 mg/kg/week N=60
Age	
Median (min–max), years	7 (1–15)
Distribution, n (%)	
<2 years	2 (3.3)
2 to <8 years	33 (55.0)
8 to <12 years	22 (36.7)
≥12 years	3 (5.0)
Haemophilia severity, n (%)	
Mild*	2 (3.3)
Moderate	1 (1.7)
Severe	57 (95.0)
Previous ITI, n (%)	
Yes	43 (71.7)
No	17 (28.3)

	Emicizumab 1.5 mg/kg/week N=60
Treatment, n (%)	
Episodic	16 (26.7)
Prophylactic	44 (73.3)
Weight (kg)	
Median (min–max)	22.9 (9.5–63.0)
Bleeds during prior 24 weeks	
Median (min–max)	6.0 (0–155)
Target joints, n (%)	
Yes	23 (38.3)
1	8/23 (34.8)
>1	15/23 (65.2)

# Marked Improvements in Haemo-QoL-SF Completed by Children (Aged 8–11 Years)

## Steady improvement: total and 'Physical Health' domain scores



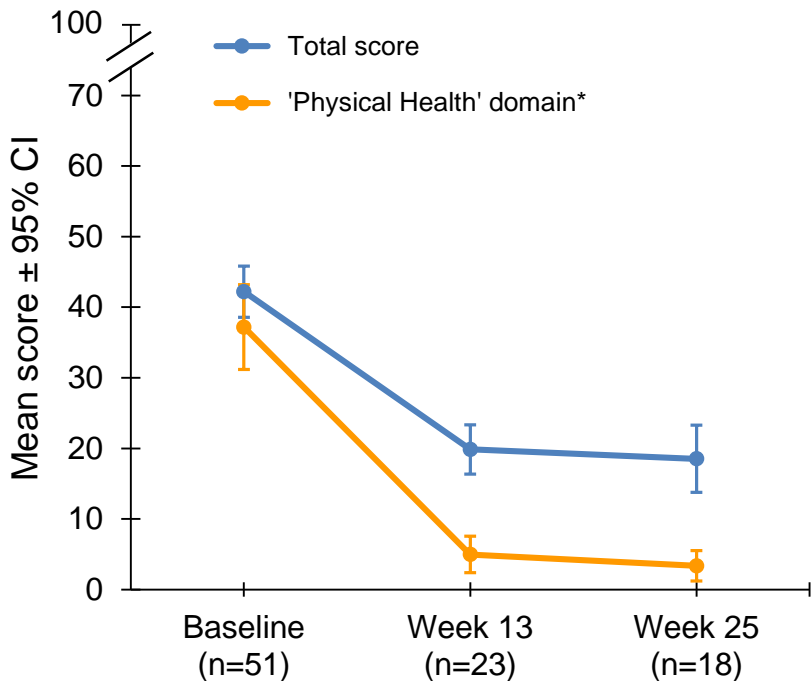
## Improvements from baseline to Week 25

Haemo-QoL-SF* domain	Mean (95% CI) change n=7 <sup>†</sup>
<b>Physical Health</b>	<b>-19.6 (-42.9; 3.6)</b>
<b>Feelings</b>	<b>-14.3 (-30.9; 2.3)</b>
View of Self	-11.6 (-36.5; 13.2)
Family	-5.4 (-15.6; 4.9)
Friends	-3.6 (-35.3; 28.2)
Other Persons	-8.0 (-19.5; 3.4)
Sports/School	-9.8 (-32.4; 12.8)
Dealing with Haemophilia	0.0 (-12.9; 12.9) <sup>‡</sup>
<b>Treatment</b>	<b>-14.3 (-36.1; 7.5)</b>
Total Score	-9.8 (-20.0; 0.4)

**Domains with greatest improvements in bold**

# Marked Improvements in Adapted Inhib-QoL Caregiver Perception of Child's Health and Caregiver Burden

## Rapid, sustained improvement: total and 'Physical Health' domain scores



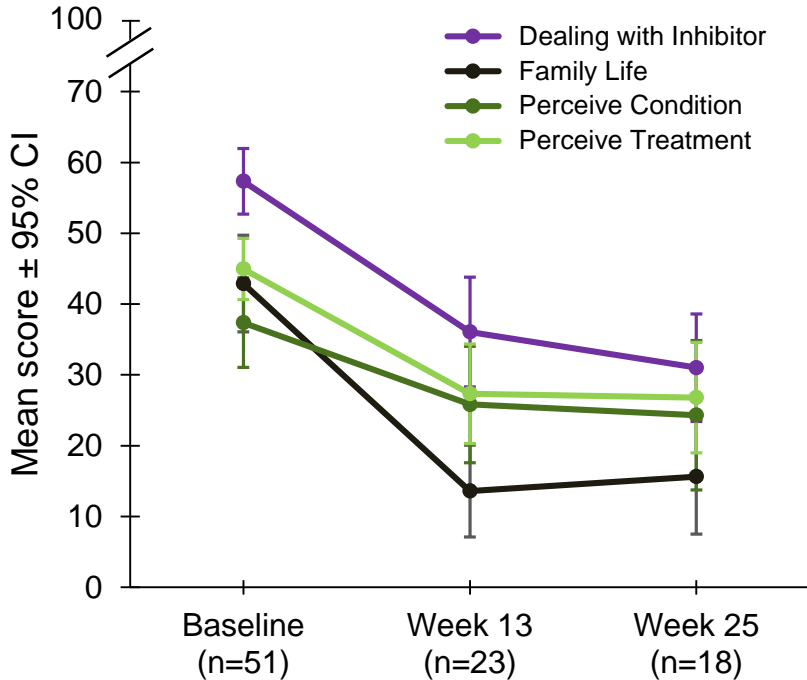
## Improvements from baseline to Week 25

Adapted Inhib-QoL <sup>†</sup> domains	Mean (95% CI) change n=16 <sup>‡</sup>
<b>Physical Health</b>	<b>-31.7 (-43.4; -20.0)</b>
Treatment	-8.6 (-25.4; 8.2)
Perceive Condition	-12.5 (-21.0; -4.0)
<b>Dealing with Inhibitor</b>	<b>-26.8 (-34.9; -18.8)</b>
Perceive Treatment	-17.4 (-28.0; -6.9)
<b>Family Life</b>	<b>-25.8 (-38.3; -13.3)</b>
Siblings	-9.6 (-25.4; 6.2)
Contact with Others	-17.2 (-27.8; -6.6)
<b>Total Score</b>	<b>-21.8 (-28.3; -15.4)</b>

*Domains with greatest improvements in bold*

# Marked Improvements in Adapted Inhib-QoL Domains Particularly Indicative of Caregiver Burden

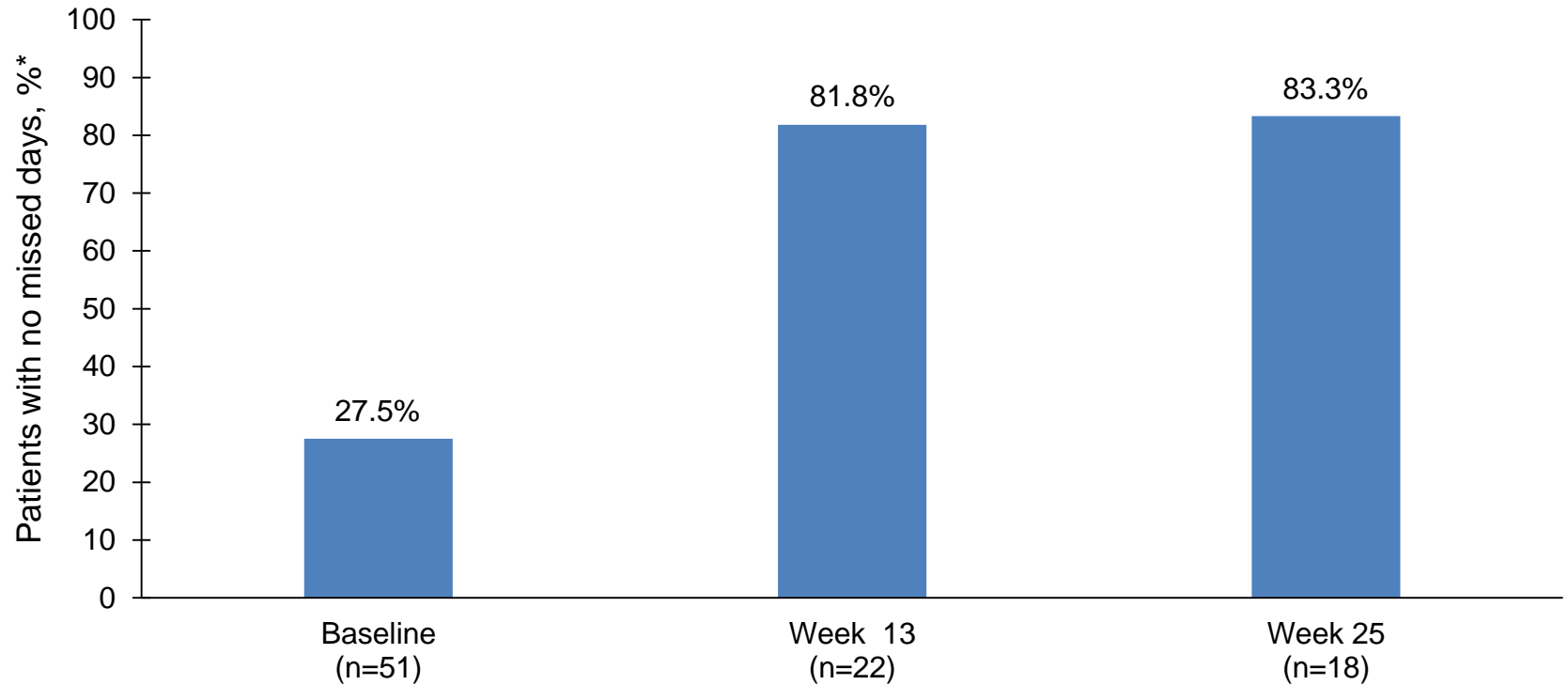
## Rapid, sustained improvement



## Types of questions covered by these Adapted Inhib-QoL\* domains

- Dealing with Inhibitor: how worried/afraid caregiver is as a result of child's haemophilia
- Family Life: impact of child's haemophilia on family life
- Perceive Condition: how concerned caregiver is about child's haemophilia and impact on family
- Perceive Treatment: how satisfied caregiver is with child's treatment

# Rapid and Maintained Increase in School/Daycare Attendance



\*Calculated at each time point for previous 4 weeks; n indicates patients at each time point who answered the question.



# Conclusions

- In paediatric PwHA with FVIII inhibitors, emicizumab prophylaxis resulted in marked improvements in:
  - Self- and caregiver-reported haemophilia-specific quality of life (especially in the ‘Physical Health’ domain)
  - School/daycare attendance
  - Aspects of caregiver burden (especially in the ‘Family Life’ and ‘Dealing With Inhibitors’ domains)
- Improvements were seen as early as the first study assessment
- Several factors may contribute to these improvements:
  - Substantial reductions in bleeding with emicizumab prophylaxis
  - Convenient, once-weekly, SC emicizumab administration
  - Favourable safety profile of emicizumab

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Thank You