Joint Health in Patients with Severe Haemophilia A Treated with Efanesoctocog Alfa: 12-Month Interim Results from the FREEDOM Study

Christoph Königs,[1] Dominique Desprez,[2] María Teresa Álvarez-Román,[3] Cristina Santoro,[4] Josefin Blomkvist,[5] Jenny Björkqvist,[5] Markus Fusser,[5] Jan Astermark,[6,7] Pål Andre Holme[8–10]

[1]Goethe University, University Hospital Frankfurt, Department of Pediatrics and Adolescent Medicine, Clinical and Molecular Hemostasis, Frankfurt, Germany; [2]Haemophilia Treatment Centre, CHU de Strasbourg, Strasbourg, France; [3]Department of Hematology, La Paz University Hospital-IdiPAZ, Madrid, Spain; [4]Hematology, Department of Translational and Precision Medicine, Sapienza University of Rome, Rome, Italy; [5]Sobi, Stockholm, Sweden; [6]Department of Haematology, Oncology and Radiation Physics, Skåne University Hospital; [7]Department of Translational Medicine, Lund University, Malmö, Sweden; [8]Department of Haematology, Oslo University Hospital, Oslo, Norway; [9]Research Institute of Internal Medicine, Oslo University Hospital, Oslo, Norway; [10]Institute of Clinical Medicine, University of Oslo, Oslo, Norway

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Introduction

Efanesoctocog alfa is a first-in-class, high-sustained activity/ultra-long factor VIII (HSA/UL FVIII) replacement therapy designed to overcome the von Willebrand factor-imposed half-life ceiling[1]

FREEDOM (NCT05817812) is an ongoing Phase 3b study evaluating **joint health** and **physical activity** in patients with severe haemophilia A receiving once-weekly efanesoctocog alfa prophylaxis for 24 months[2]

An **interim analysis** of data from the first **12 months** of FREEDOM has been conducted, and physical activity data has been presented previously[3]

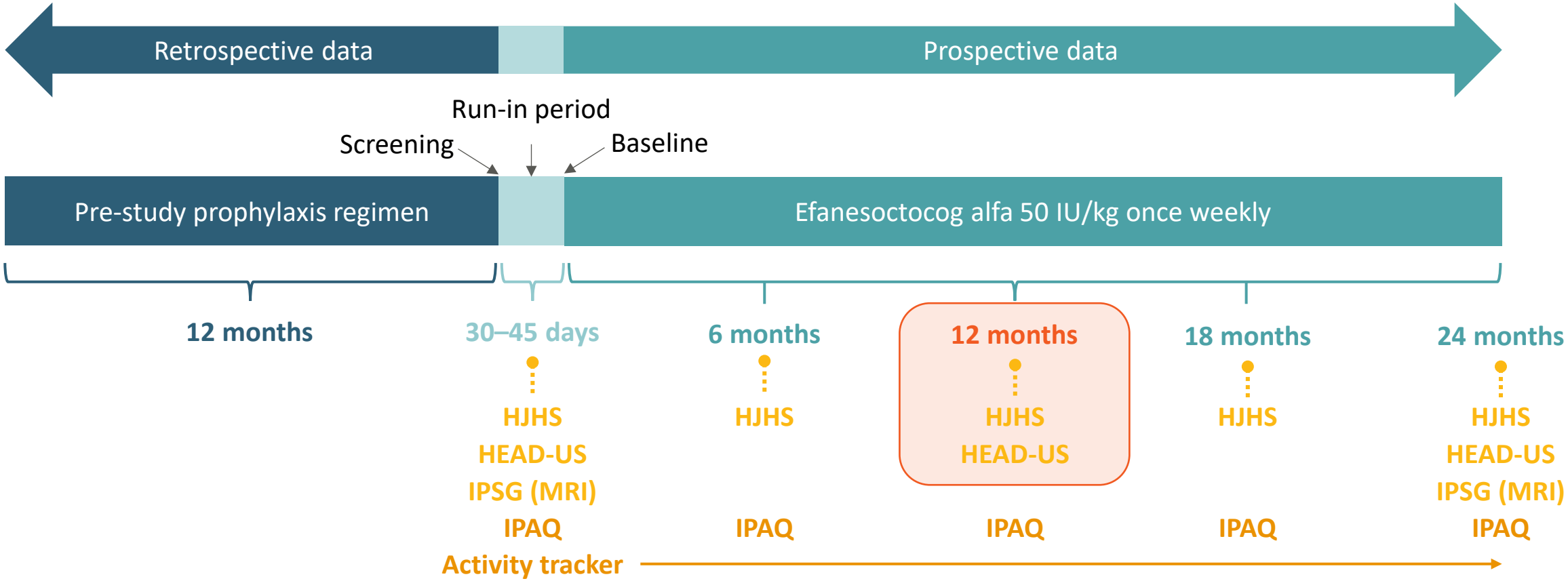
1. von Drygalski A, et al. *N Engl J Med* 2023;388:310–8; **2.** ClinicalTrials.gov (NCT05817812); **3.** Astermark J, et al. Presented at EAHAD 2026; PO050. **FVIII:** factor VIII; **HSA:** high-sustained activity; **UL:** ultra-long.

Aim

To report interim joint health and efficacy data from the first 12 months of the FREEDOM Phase 3b study

Study Design

Patients aged **≥12 years** with **severe haemophilia A**, who previously received any prophylactic FVIII replacement therapy, receive once-weekly **efanesoctocog alfa** (50 IU/kg) for 24 months in FREEDOM

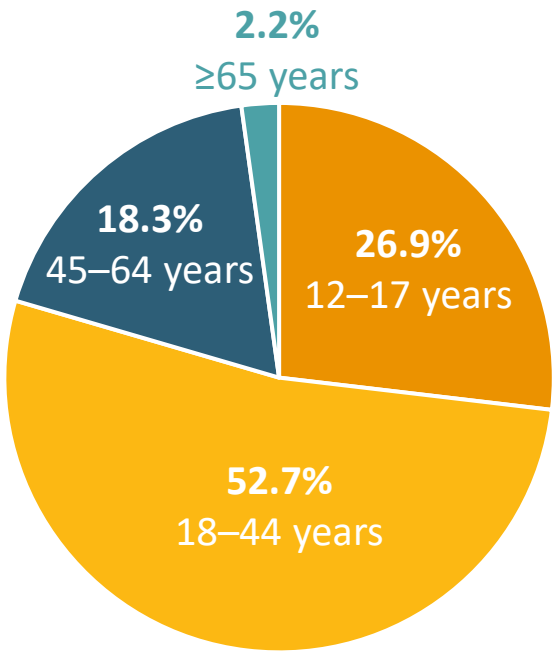


All patients provided informed consent and FREEDOM was approved by an independent ethics committee. Data are reported at the 12-month interim data cut (21 July 2025). **FVIII:** factor VIII; **HEAD-US:** Haemophilia Early Arthropathy Detection with Ultrasound; **HJHS:** Haemophilia Joint Health Score; **IPAQ:** International Physical Activity Questionnaire; **IPSG:** International Prophylaxis Study Group; **IU:** international unit; **MRI:** magnetic resonance imaging.

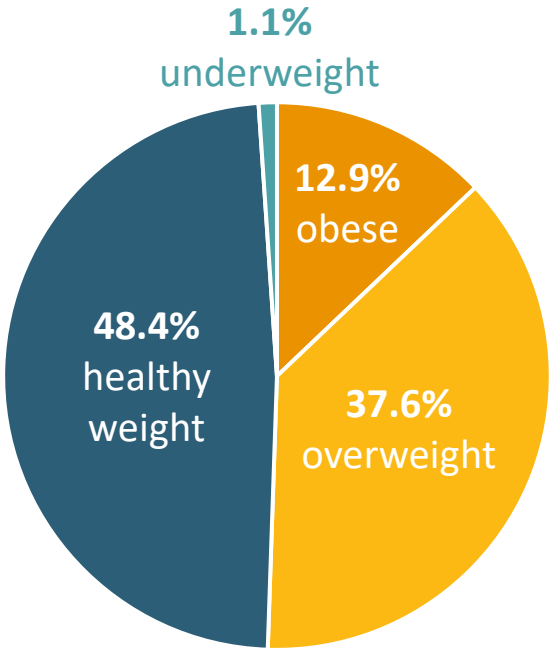
Baseline Characteristics

- In total, **93 male patients** with severe haemophilia A were enrolled across 32 sites in 14 European countries
- At Month 12, **2 out of 93 patients had discontinued**; 1 due to patient withdrawal and 1 due to use of a prohibited medication[a]

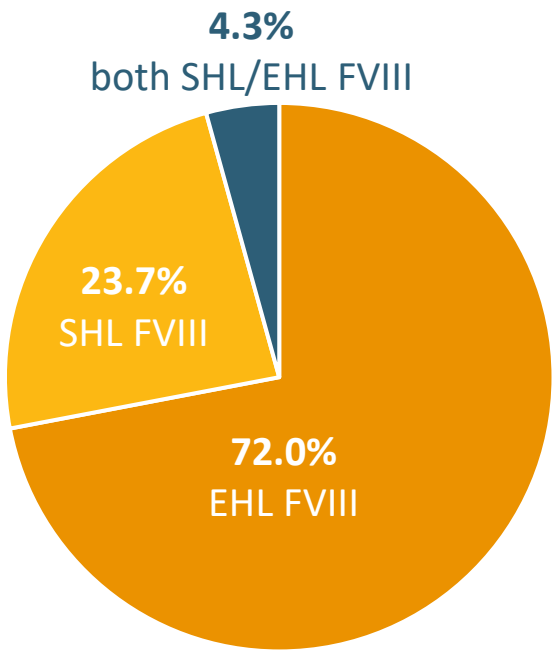
Age
Mean (SD): **31.1 (14.5)**



BMI
Median (range): **24.5 (16.2–41.9)**



Prior prophylaxis



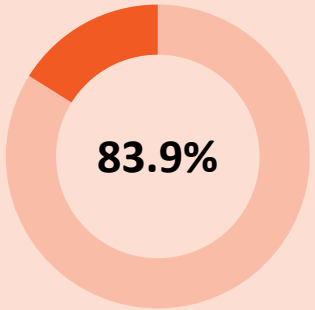
BMI categories are age dependent. Underweight: for adults, BMI <18.5; for adolescents, BMI < −2SD, where SD is the SD from WHOs growth reference data for that age.[1] Healthy weight: for adults, BMI 18.5 – <25; for adolescents, −2SD ≥ BMI <+1SD. Overweight: for adults, BMI 25 – <30; for adolescents, +1SD ≤ BMI ≤ +2SD. Obese: for adults, BMI >30; for adolescents, BMI > +2SD. **[a]** Worsening atrial fibrillation treated with low molecular weight heparin. **BMI:** body mass index; **EHL:** extended half-life; **FVIII:** factor VIII; **SD:** standard deviation; **SHL:** standard half-life; **WHO:** World Health Organization. **1.** World Health Organization. Growth Reference Data for 5–19 Years. Available at: www.who.int/tools/growth-reference-data-for-5to19-years/indicators/bmi-for-age.

Bleed Protection was Very Effective, with >80% of Patients having Zero Treated Bleeds or Joint Bleeds after 12 Months

Total ABR

Mean (SD)	**0.3** (0.9)
Median (IQR)	**0** (0–0)

Zero bleeds

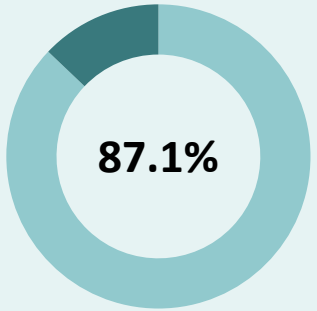


n=78/93

Joint ABR

Mean (SD)	**0.2** (0.8)
Median (IQR)	**0** (0–0)

Zero joint bleeds



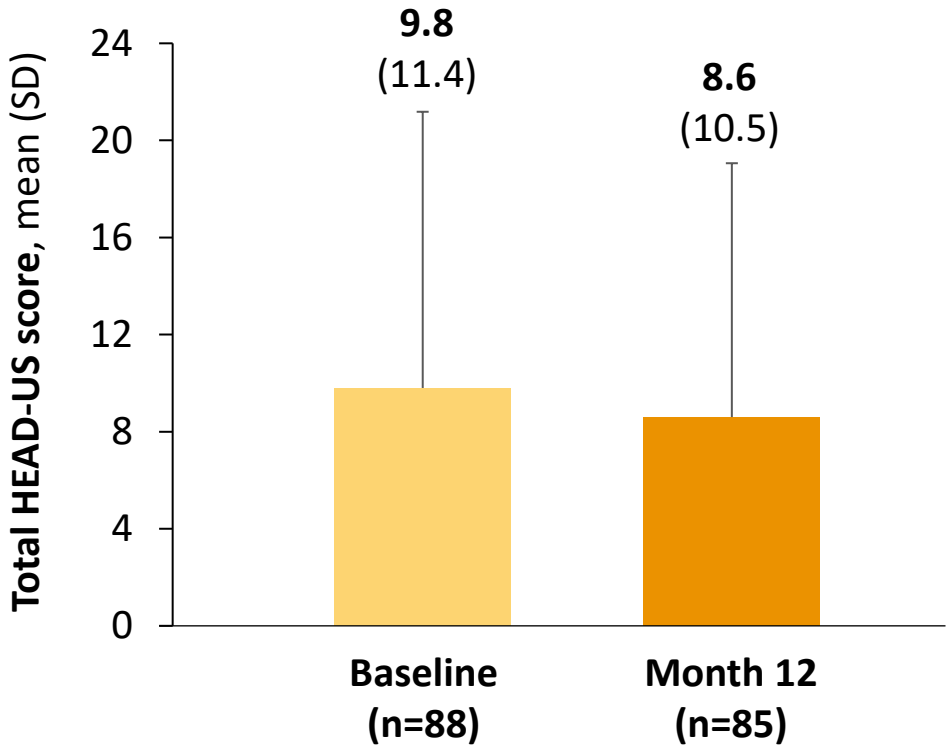
n=81/93

87% of patients in FREEDOM were **free of joint bleeds** at 12 months, while maintaining **high physical activity levels** according to IPAQ[1]

Data are presented for treated bleeds at 12 months. **ABR:** annualised bleeding rate; **IPAQ:** International Physical Activity Questionnaire; **IQR:** interquartile range; **SD:** standard deviation. **1.** Astermark J, et al. Presented at EAHAD 2026 (Poster PO050).

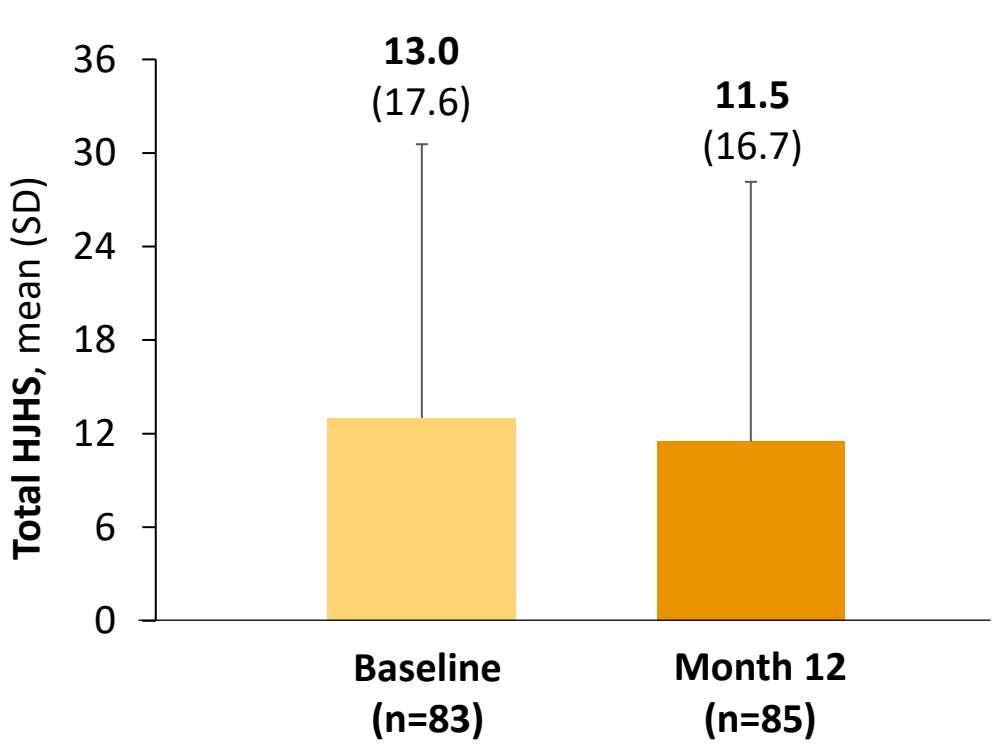
Mean Total HEAD-US and HJHS Scores Remained Stable from Baseline to Month 12

Total HEAD-US



	Baseline (n=88)	Month 12 (n=85)
Mean change[b] (SD)	-	0.0 (2.8)

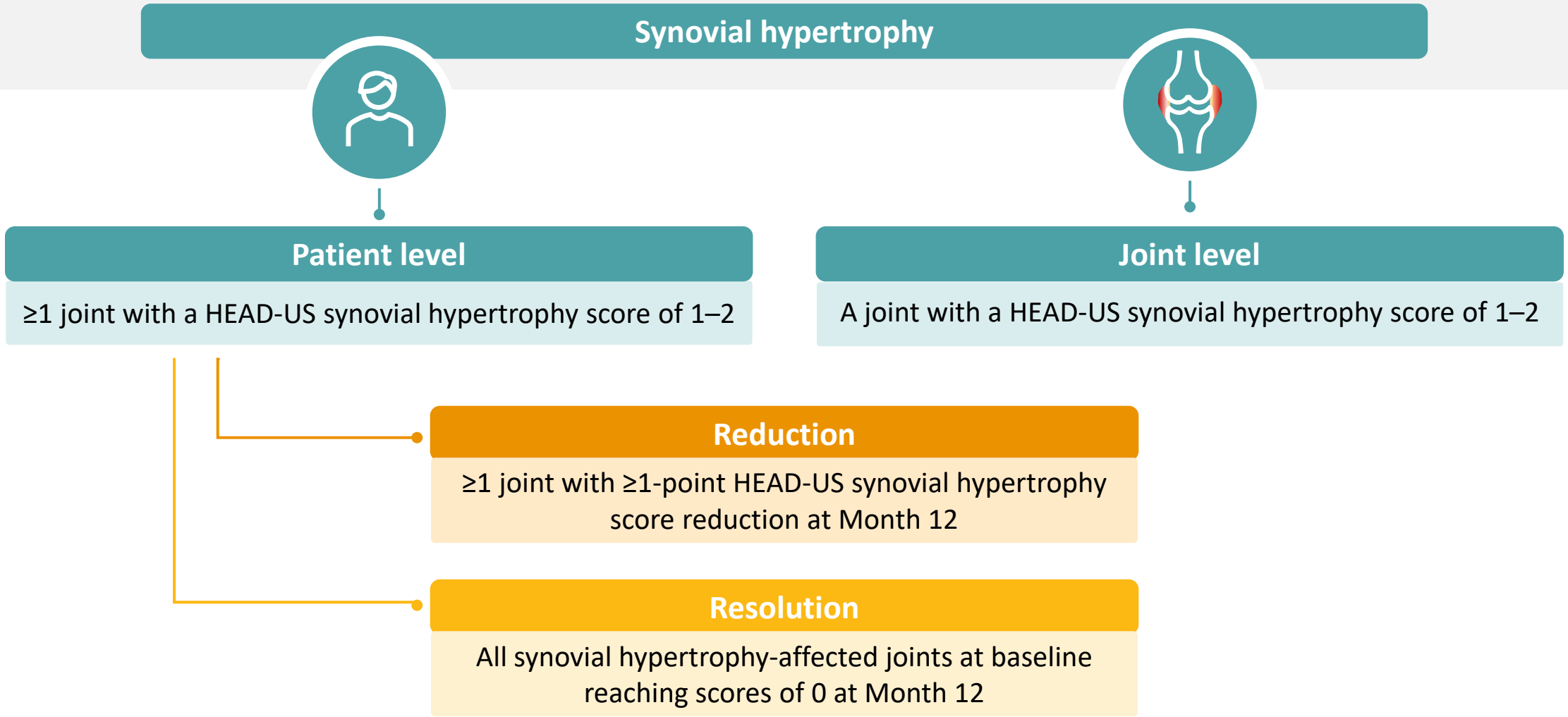
Total HJHS[a]



	Baseline (n=83)	Month 12 (n=85)
Mean change[c] (SD)	-	–1.1 (4.4)

Error bars represent standard deviation. **[a]** Total HJHS includes global gait score. **[b]** Patients with valid assessments at baseline and Month 12 are included (n=82). **[c]** Patients with valid assessments at baseline and Month 12 are included (n=78). **HEAD-US:** Haemophilia Early Arthropathy Detection with Ultrasound; **HJHS:** Haemophilia Joint Health Score; **SD:** standard deviation.

Synovial Hypertrophy as Evaluated by HEAD-US

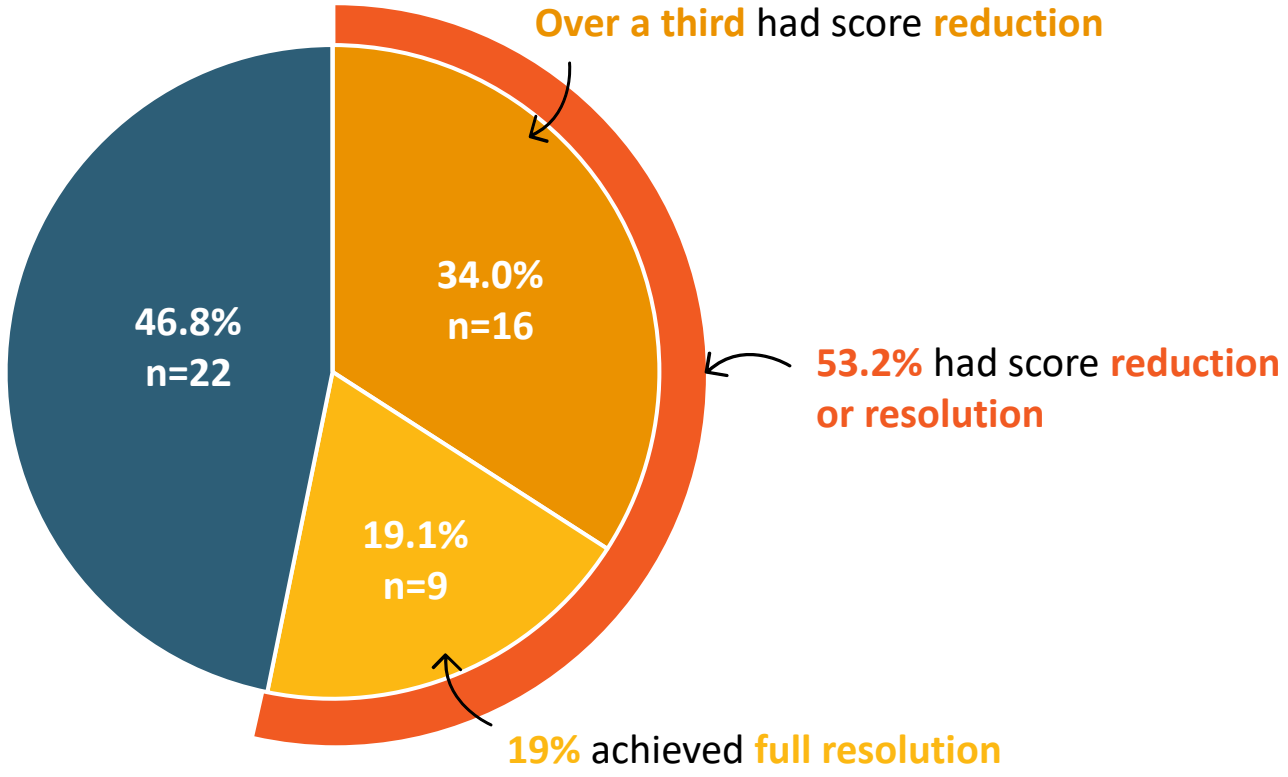


HEAD-US scoring of all index joints (ankles, elbows and knees) was performed and assessed locally. **HEAD-US:** Haemophilia Early Arthropathy Detection with Ultrasound.

53% of Patients had Reduced or Resolved Synovial Hypertrophy at 12 Months (HEAD-US score)

Patients with baseline synovial hypertrophy and assessment at Month 12 (n=47):

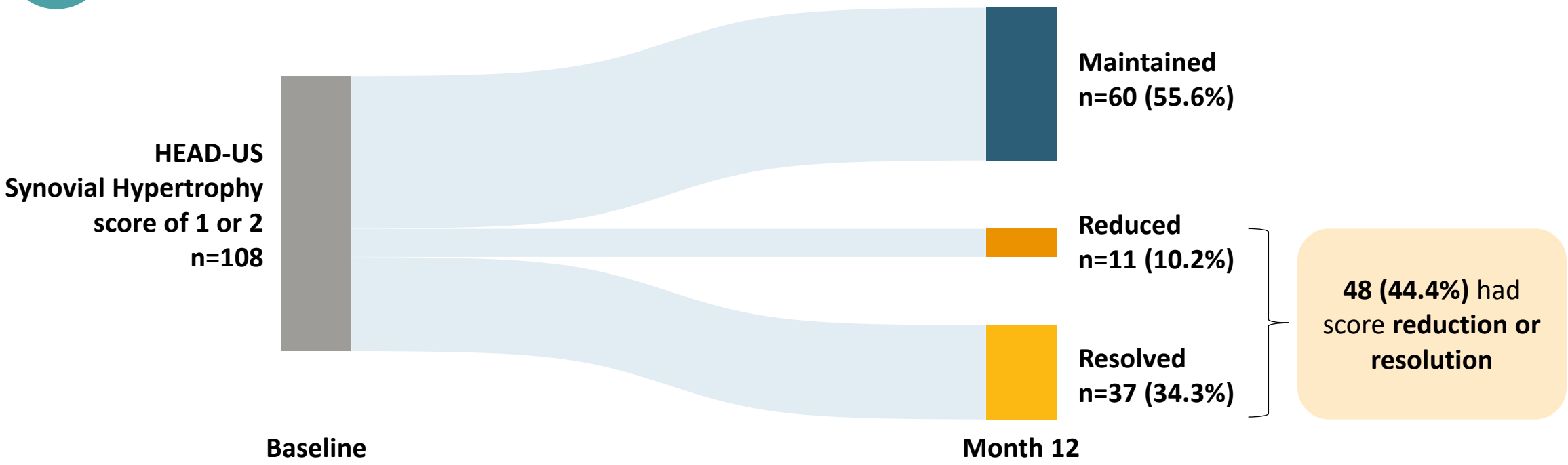
- Maintenance
- Reduction
- Resolution



Included patients had synovial hypertrophy at baseline and assessment at Month 12. Percentages do not sum to 100 due to rounding. **HEAD-US:** Haemophilia Early Arthropathy Detection with Ultrasound.

44% of Joints had Reduced or Resolved Synovial Hypertrophy at 12 Months (HEAD-US score)

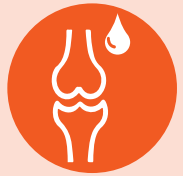
Joints with synovial hypertrophy at baseline and assessment at Month 12:



Of **422 joints without synovial hypertrophy** at baseline and assessment at Month 12, **402 (95.3%) maintained a score of 0**[a]

Included patients had synovial hypertrophy at baseline and assessment at Month 12; seven joints had missing measurements at baseline and 23 joints had missing measurements at Month 12, so were excluded from these analyses. Percentages at Month 12 do not sum to 100 due to rounding. **[a]** 19 (4.5%) joints had a score increase from 0 to 1 and 1 (0.2%) joint increased from 0 to 2. **HEAD-US:** Haemophilia Early Arthropathy Detection with Ultrasound.

Conclusions from FREEDOM After 12 Months of Weekly 50 IU/kg Efanesoctocog Alfa Prophylaxis



Efanesoctocog alfa prophylaxis was **highly effective** in preventing bleeds; **87%** of patients had **no treated joint bleeds** over **12 months,** while maintaining high physical activity levels[1]

53% of patients with synovial hypertrophy at baseline had **reduction or resolution** after 12 months

44% of joints with synovial hypertrophy at baseline had **reduction or resolution** after 12 months

IU: international unit. **1.** Astermark J, et al. Presented at EAHAD 2026 (Poster PO050).

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