

A Novel Guillain-Barré Syndrome Clinical Progression Scale to Characterise the Patient's Care Journey

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Introduction

- Guillain-Barré syndrome (GBS) is a rare, acute, life-altering autoimmune polyneuropathy that is characterised by rapidly progressive weakness and prolonged recovery¹
- Tanruperbart (ANX005), a monoclonal antibody, is a targeted immunotherapy that selectively inhibits C1q, the initiating molecule of the classical complement pathway, enabling rapid and complete inhibition of classical complement mediated neuroinflammation and nerve damage^{2,3}
- GBS-02 (NCT04701164) was a Phase 3, multicentre, randomised, double-blind, placebo-controlled study of tanruperbart in patients with GBS in Bangladesh and the Philippines⁴
- We describe a novel GBS Clinical Progression Scale (CLIPS) used in GBS-02 to characterise the patient's care trajectory during the acute and recovery phases of GBS

Methods









- The CLIPS scale was developed to describe the care trajectory of patients with GBS by capturing transitions across levels of care over time
- The CLIPS was adapted by the study sponsors and GBS experts, based on the World Health Organization (WHO) Covid-19 Clinical Progression Scale,⁵ which is an ordinal measure based on levels of care (Table 1) and designed to be globally applicable and healthcare system-agnostic
- The CLIPS scale is an 8-grade ordinal measure to classify the level of GBS-specific management and supportive care required, rather than functional status (Table 2)
- In GBS-02, the CLIPS was administered by the physician weekly for 4 weeks, and then at 2, 3, 4 and 6 months, providing a cumulative insight into the level and duration of care provided during the 26-week study period (Figure 1)

Table 1. WHO Clinical Progression Scale⁵

Patient state	Descriptor	Score
Uninfected	Uninfected: no viral RNA detected	0
	Asymptomatic; viral RNA detected	1
Ambulatory mild disease	Symptomatic; independent	2
	Symptomatic; assistance needed	3
	Hospitalised; no oxygen therapy ^a	4
Hospitalised: moderate disease	Hospitalised; oxygen by mask or nasal prongs	5
	Hospitalised; oxygen by NIV or high flow	6
	Intubation and mechanical ventilation, pO ₂ /FiO ₂ ≥150 or SpO ₂ /FiO ₂ ≥200	7
Hospitalised: severe disease	Mechanical ventilation, pO ₂ /FiO ₂ <150 (SpO ₂ /FiO ₂ <200) or vasopressors	8
	Mechanical ventilation, pO ₂ /FiO ₂ <150 and vasopressors, dialysis, or ECMO	9
	Dead	Dead

^aIf hospitalised for isolation only, record status as for ambulatory patient. ECMO, extracorporeal membrane oxygenation; FiO₂, fraction of inspired oxygen; NIV, non-invasive ventilation; pO₂, partial pressure of oxygen; SpO₂, oxygen saturation.

Table 2. GBS Clinical Progression Scale^a

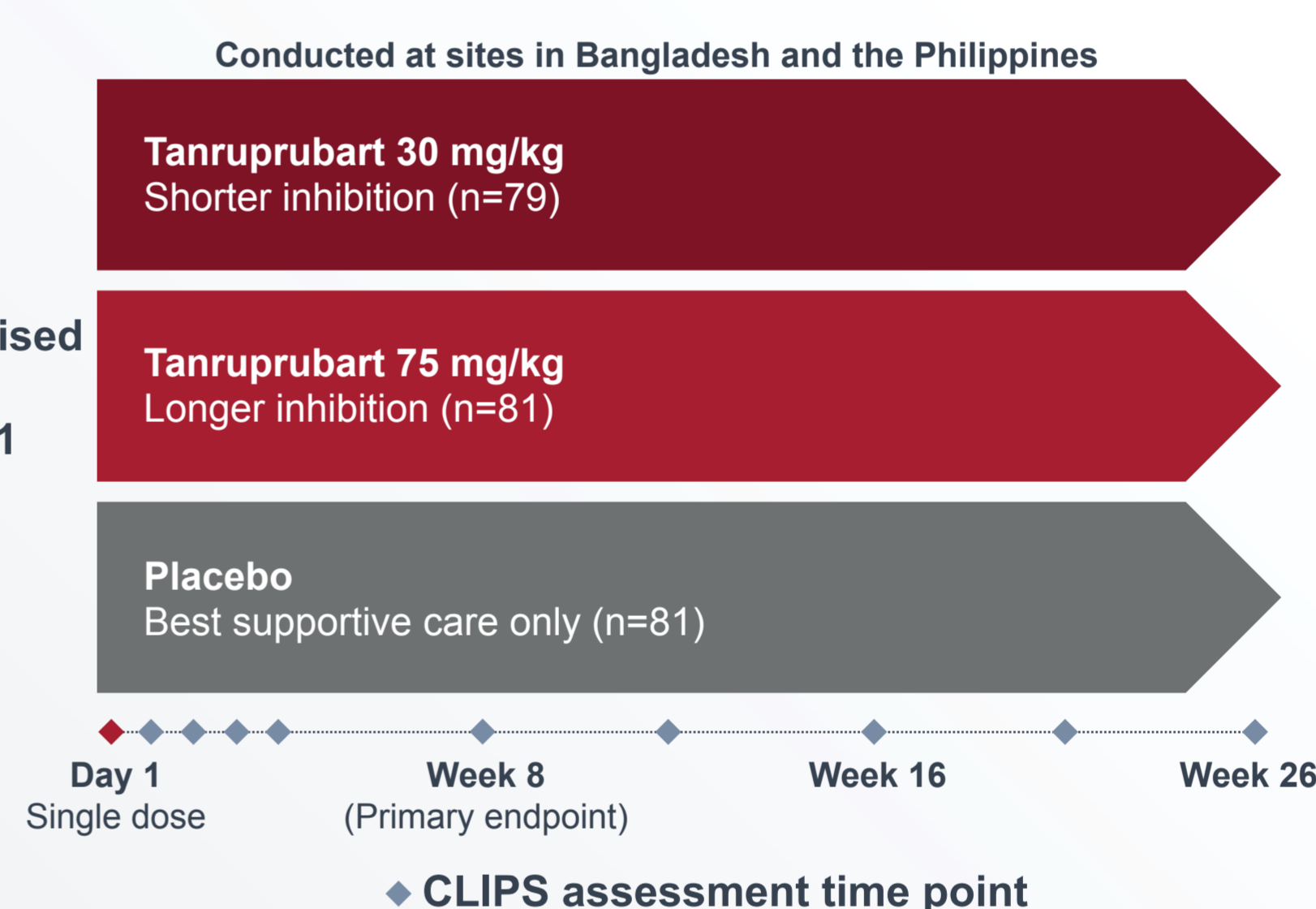
Grade	Description of the Grade
0 	Discharged home, independent ADLs, capable of self-care
1 	Requiring ongoing nursing care or assistance by trained caregivers in ADL
2 	Requiring intensive physical/occupational/speech therapy and/or general medical or nursing care during recovery
3 	Hospitalised, requiring ongoing medical or nursing care during GBS progression or recovery
4 	Not mechanically ventilated but requiring intensive monitoring
5 	Receiving non-invasive ventilation or high-flow oxygen
6 	Receiving invasive mechanical ventilation
7 	Death

^aCLIPS is a novel scale that is not validated and is not intended to predict or assess treatment effect or make treatment decisions. ADL, activities of daily living.

Figure 1. GBS-02 study design

Key inclusion criteria:

- Aged ≥16 years
 - With a GBS-disability score (GBS-DS) 3, 4 or 5
 - ≤10 days from onset of weakness to treatment
 - Did not have access to intravenous immunoglobulin or plasma exchange
- Stratified by baseline prognostic factors: muscle strength and time from onset of weakness



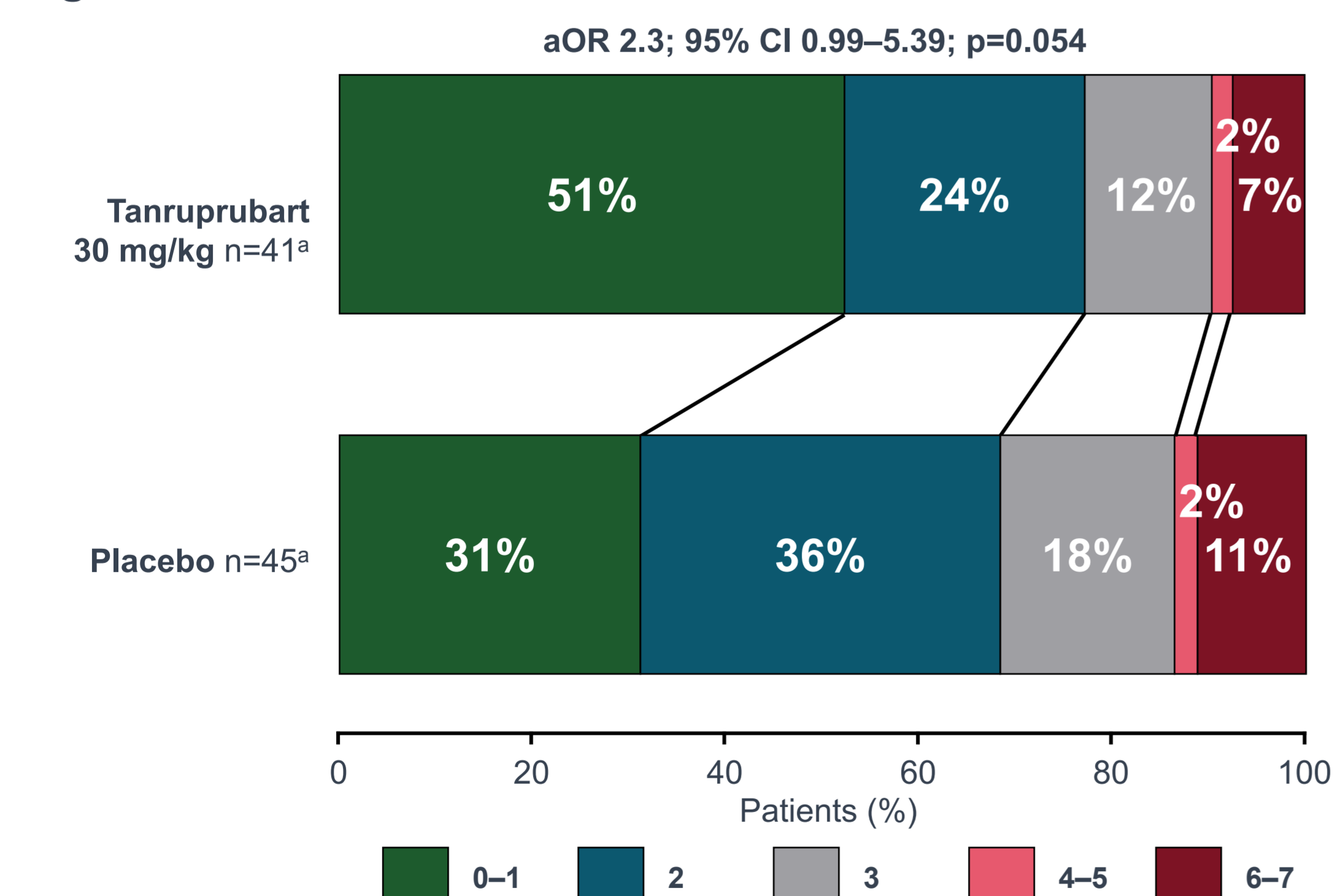
Primary endpoint:

- GBS-DS at Week 8

Results: CLIPS outcomes

- In a prespecified analysis at Week 4, the odds of requiring less care favoured tanruperbart 30 mg/kg over placebo on the CLIPS (adjusted odds ratio [aOR] 2.3; 95% CI 0.99–5.39; p=0.054; Figure 2)
- These results were consistent with functional outcomes used to establish treatment effect (GBS-DS; aOR 2.5; 95% CI 1.28–4.86; p=0.0073; Figure 3)

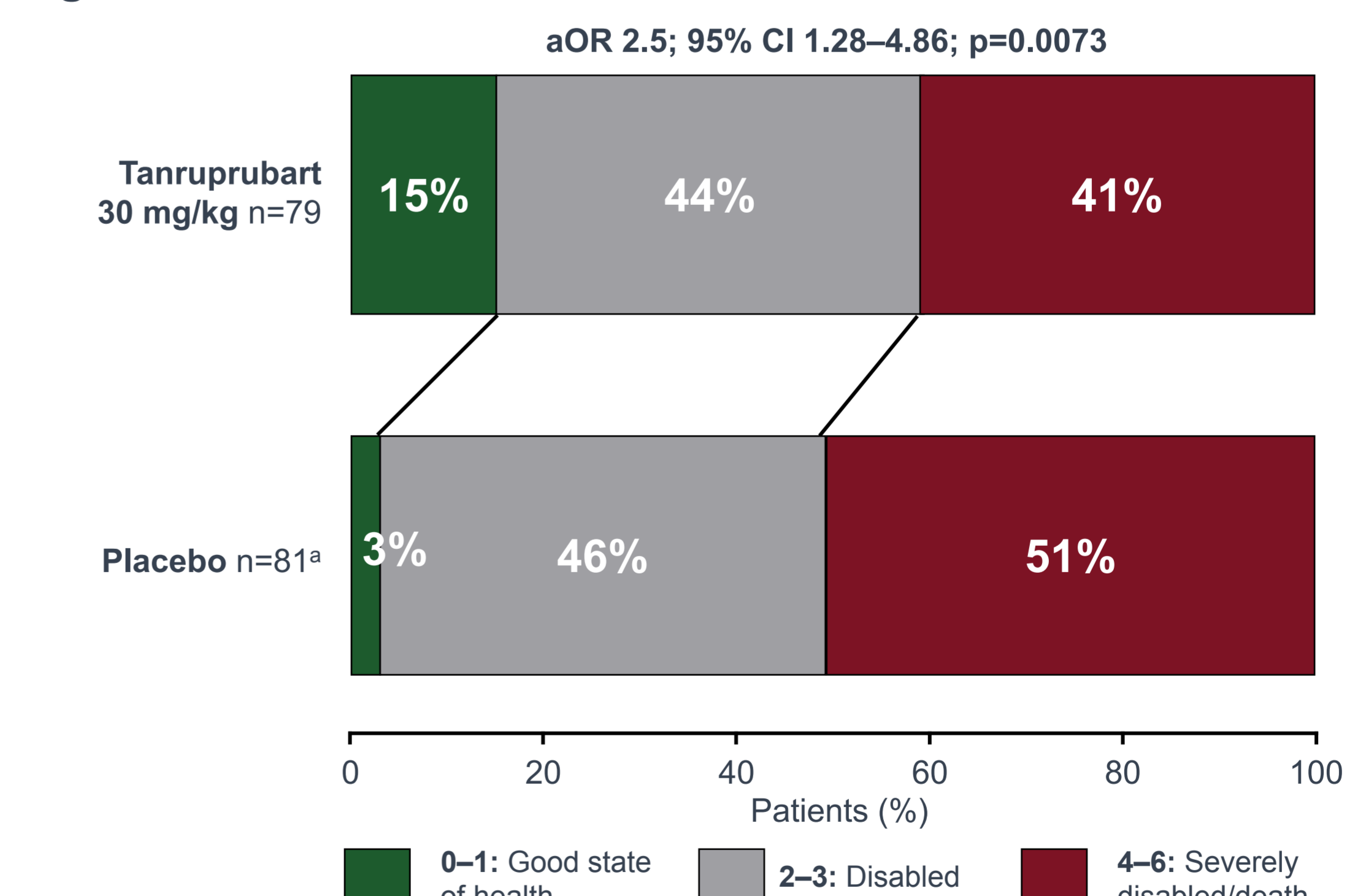
Figure 2. CLIPS at Week 4



^aThe CLIPS was included as a late amendment to the GBS-02 trial and assessed in a subset of patients. 1 patient in each group had missing CLIPS data at Week 4.

- The CLIPS provided a practical insight into the level of care and supportive measures required by patients with GBS
- To our knowledge, CLIPS is the first GBS-specific tool designed to map the patient's care trajectory by grading the level of care and supportive management required over time, rather than functional status alone

Figure 3. GBS-DS at Week 4



^a1 patient in the placebo group had missing CLIPS data at Week 4.

CONCLUSIONS

- CLIPS offers a pragmatic, healthcare system-agnostic lens on the GBS care journey, enabling cross-country comparison of acute disease burden and supportive care needs
- Early separation of CLIPS at Week 4 favouring tanruperbart 30 mg/kg supports a clinically meaningful shift toward lower resource intensity during early GBS

References

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Disclosures

H-AK: Employment with and shareholder of Annexon Biosciences. KCG: Consultancy/advisory role with Annexon Biosciences, argenx, Janssen and Sanofi. QDM: Consultancy/advisory role with Annexon Biosciences. TH: Consultancy/advisory role with Dianthus Therapeutics, Sanofi, Janssen, Nuvig, Biocryst, Argenx, AbbVie, Amgen and Annexon. For additional information, please reach out to Henk-André Kroon: hakroon@annexonbio.com