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**Supplementary Table 1. Outcome Measures**

Outcome	Measure	Description	Range
<b>Primary outcome</b>			
<b>Disability</b>	Inflammatory Rasch-Overall Disability Scale (iRODS)	<ul style="list-style-type: none"> <li>• Patient reported linear disability scale, developed within the frame work of Item Response Theory<sup>1</sup></li> <li>• Unit of measurement expressed in logits</li> <li>• Higher scores represent lower levels of disability</li> </ul>	Logits: -6.95 - 8.11
<b>Secondary outcomes</b>			
<b>Muscle Strength</b>	Medical research council (MRC) sum score	<ul style="list-style-type: none"> <li>• 6 pairs of muscles</li> <li>• Shoulder abduction, elbow flexion, wrist extension, hip flexion, knee extension and foot dorsiflexion</li> <li>• Higher scores represent more muscle strength</li> </ul>	0-60
<b>Grip Strength</b>	Martin Vigori meter	<ul style="list-style-type: none"> <li>• Measured in kilo Pascal (kPa)</li> <li>• Higher score represents greater grip strength</li> <li>• Highest value out of 3 measurements per hand</li> <li>• Dominant hand in typical CIDP and most affected hand in multifocal or asymmetric CIDP</li> </ul>	0-160
<b>Sensory impairment</b>	Modified INCAT sensory Sum score (INCAT-SS)	<ul style="list-style-type: none"> <li>• Sensory scale including vibration and pinprick sense plus a two-point discrimination value</li> <li>• Higher score represents more sensory impairment</li> </ul>	0-20
<b>Pain</b>	Pain Intensity Numerical Rating Scale (PI-NRS)	<ul style="list-style-type: none"> <li>• Average pain over the past 4 weeks</li> <li>• Higher score represents more pain</li> </ul>	0-10
<b>Fatigue</b>	Rasch-built fatigue severity scale (FSS)	<ul style="list-style-type: none"> <li>• 7 item scale</li> <li>• Higher score represents greater fatigue</li> </ul>	0-49
<b>Disability</b>	AMC linear disability score (ALDS)	<ul style="list-style-type: none"> <li>• A calibrated generic item bank to measure the level of physical disability in patients with chronic diseases.</li> <li>• Higher scores represent lower levels of disability</li> </ul>	0-100
<b>Quality of life</b>	Short form 36 (SF-36)	<ul style="list-style-type: none"> <li>• Divided into physical and mental health components</li> <li>• Higher scores represent better quality of life</li> </ul>	Normalized to the Dutch population mean score of 50 and a SD of 10
<b>Patient's perception of deterioration or improvement</b>	Patient global impression of change scale	<ul style="list-style-type: none"> <li>• 5 point Likert-scale on which patients indicate if their CIDP complaints are much better, better, similar, worse or much worse than before start of the study</li> </ul>	NA

Supplementary **Table 2. Protocol violations**

<b>Patient</b>	<b>Protocol violation</b>	<b>Study action</b>
1	Patient in the withdrawal group refused to stay blinded at 12 weeks due to anxiety of not knowing what the treatment allocation was. This patient agreed to proceed with follow-up assessments and remained stable until last follow-up visit.	- Included in intention-to-treat analysis - Excluded in per-protocol analysis
2	Patient in the IVIg continuation group was unblinded at 3 weeks of follow-up due to an invoice from the insurance company for IVIg treatment; this patient remained stable until last follow-up visit.	- Included in intention-to-treat analysis - Excluded in per-protocol analysis
3	Patient was wrongly allocated during the minimization procedure in terms of duration of treatment. The duration was corrected in the data-analysis.	- Included in intention-to-treat analysis - Included in per-protocol analysis
4	Study treatment was delayed because of one extra regular infusion after randomization.	- Included in intention-to-treat analysis - Included in per-protocol analysis

Supplementary table 3. Different outcome measures in patients with a relapse endpoint at different time points

N (%)		Week 6		Week 12		Week 18		Week 24	
		Freq.	Cum. Freq.	Freq.	Cum. Freq.	Freq.	Cum. Freq.	Freq.	Cum. Freq.
<b>All relapse endpoints (N=30)</b>									
<b>IVIg withdrawal (N=17)</b>	Total	7 (42)	7 (42)	6 (20)	13 (65)	2 (12)	15 (88)	2 (12)	17 (100)
	iRODS <sup>a</sup>	5/7 (71)	5/7 (71)	2/6 (33)	7/13(54)	1/2 (50)	8/15 (53)	2/2 (100)	10/17 (59)
	GS <sup>b</sup>	5/7 (71)	5/7 (71)	3/6 (50)	8/13(62)	2/2 (100)	10/15 (67)	2/2 (100)	12/17 (71)
	MRC <sup>c</sup>	4/7 (57)	4/7 (57)	1/6 (17)	5/13 (38)	1/2 (50)	6/15 (37)	1/2 (50)	7/17 (41)
	PGIC <sup>d</sup>	7/7 (100)	7/7 (100)	5/5 (100)	12/12 (100)	2/2 (100)	14/14 (100)	2/2 (100)	16/16 (100)
<b>IVIg continuation (N=13)</b>	Total	2 (15)	2 (15)	8 (62)	10 (77)	3 (23)	13 (100)	0	13 (100)
	iRODS	1/2 (50)	1/2 (50)	4/8 (50)	5/10 (50)	0/3	5/13 (38)		5/13 (38)
	GS	2/2 (100)	2/2 (100)	2/8 (25)	4/10 (40)	2/3 (67)	6/13 (46)		6/13 (46)
	MRC	1/2 (50)	1/2 (50)	4/8 (50)	5/10 (50)	1/3 (33)	6/13 (46)		6/13 (46)
	PGIC	1/2 (50)	1/2 (50)	6/6 (100)	7/8 (88)	3/3 (100)	10/11 (91)		10/11 (91)
<b>Relapse according to MCID iRODS</b>									
<b>IVIg withdrawal (N= 10)</b>	Total	5 (50)	5 (50)	2 (20)	7 (70)	1 (10)	8 (80)	2 (20)	10 (100)
	GS	5/5 (100)	5/5 (100)	1/2 (50)	6/7 (86)	1/1 (100)	7/8 (88)	2/2 (100)	9/10 (90)
	MRC	4/5 (80)	4/5 (80)	1/2 (50)	5/7 (71)	0/1 (0)	5/8 (63)	1/2 (50)	6/10 (60)
	PGIC	5/5 (100)	5/5 (100)	1/1 (100)	6/6 (100)	1/1 (100)	7/7 (100)	2/2 (100)	9/9 (100)
<b>IVIg continuation N=5</b>	Total	1 (20)	1 (20)	4 (80)	5 (100)	0 (0)	5 (100)	0	5 (100)
	GS	1/1 (100)	1/1 (100)	2/4 (50)	3/5 (60)		3/5 (60)		3/5 (60)
	MRC	1/1 (100)	1/1 (100)	3/4 (75)	4/5 (80)		4/5 (80)		4/5 (80)
	PGIC	1/1 (100)	1/1 (100)	3/3 (100)	4/4 (100)		4/4 (100)		4/4 (100)
<b>Other relapse</b>									
<b>IVIg withdrawal (N=7)</b>	Total	2 (29)	2 (29)	4 (57)	6 (86)	1 (14)	7 (100)	0 (0)	7 (100)
	GS	2/2 (100)	2/2 (100)	2/4 (50)	4/6 (67)	1/1 (100)	5/7 (71)		5/7 (71)
	MRC	0/2 (0)	0/2 (0)	0/4 (0)	0/6 (0)	1/1( 100)	1/7 (14)		1/7 (14)
	PGIC	2/2 (100)	2/2 (100)	4/4 (100)	6/6 (100)	1/1 (100)	7/7 (100)		7/7 (100)
<b>IVIg continuation (N=8)</b>	Total	1 (13)	1 (13)	4 (50)	5 (63)	3 (38)	8 (100)	0 (0)	8 (100)
	GS	1/1 (100)	1/1 (100)	0/4 (0)	1/5 (20)	1/3 (33)	2/8 (25)		2/8 (25)
	MRC	1/1 (100)	1/1 (100)	1/4 (25)	1/5 (20)	1/3 (33)	2/8 (25)		2/8 (25)
	PGIC	0/1 (0)	0/1 (0)	3/3 (100)	3/4 (75)	3/3 (33)	6/7 (86)		6/7 (86)

<sup>a</sup>Minimal clinically important difference on the iRODS; <sup>b</sup>Relapse on grip strength: deterioration of at least 8kPa; <sup>c</sup>Relapse on MRC: deterioration of at least 2 points on MRC sum score; <sup>d</sup>Relapse on PGIC scale (1-5) was defined as a score of: a little worse or a lot worse than before the study.

Abbreviations: freq: frequency, cum: cumulative, IVIg: intravenous immunoglobulins, GS: grip strength, MRC: MRC sum score, PGIC: patient global impression of change scale.

## Appendix 1. Linear regression in the context of non-inferiority

We used multivariable linear regression on the iRODS follow-up scores in the context of non-inferiority by comparing the lower bound of the 95% confidence interval of the between group-difference with -0.65 as the margin of non-inferiority, adjusting for both the iRODS baseline scores and duration of prior IVIg. The following results were obtained:

Model Coefficients

Predictor	Estimate	SE	95% confidence interval	
			lower bound	upper bound
Intercept	-0.319	0.459	-0.1238	0.600
iRODS baseline	0.921	0.077	0.766	1.076
Duration prior IVIg treatment	0.370	0.395	-0.422	1.163
Withdrawal treatment	-0.558	0.395	-1.348	0.233

After adjustment, the coefficient for withdrawal treatment was -0.558 with a lower bound of -1.348. With the lower bound well below the non-inferiority margin of -0.65, the multivariable approach fails to demonstrate non-inferiority of withdrawal treatment.

## References

1. van Nes SI, Vanhoutte EK, van Doorn PA, et al. Rasch-built Overall Disability Scale (R-ODS) for immune-mediated peripheral neuropathies. *Neurology* 2011; **76**(4): 337-45.