

Supplementary table I: Reliability and validity of continuous outcome measures

	Scoring dimension		Reliability		Validity
		Test-retest	Intra-rater	Inter-rater	
10MWT	Gait speed (m/s)		r=0.983 (n=22) [1] ICC=0.98-0.99 (n=37) [2]	r=0.974 (n=20) [1] ICC=0.95-0.98 (n=37) [2]	TUG: r=0.89 (n=70) [1] 6MWT: $\rho$ =-0.95 (n=62) [1] WISCI II: $\rho$ =-0.68 (n=67) [1]
6mWT	Distance (m)		r=0.981 (n=22) [1] ICC=0.99 (n=37) [2]	r=0.970 (n=20) [1] ICC=0.99 (n=37) [2]	10MWT: $\rho$ =-0.95 (n=62) [1] TUG: $\rho$ =-0.88 (n=62) [1] WISCI II: $\rho$ =0.60 (n=60) [1]
2mWT	Distance (m)		r=0.97 (n=46) [3] <sup>a</sup>		10mWT: r=0.932 (n=32) [4] TUG: r=-0.623 (n=32) [4] WISCI II: $\rho$ =0.749 (n=32) [4]
TUG	Time (s)		r=0.979 (n=22) [1]	r=0.973 (n=20) [1]	10MWT: r=0.89 (n=70) [1] 6MWT: $\rho$ =-0.88 (n=62) [1] WISCI II: $\rho$ =-0.76 (n=67) [1]
SCAR	Arbitrary unit linear unit				Internally validated with second independent data set. Pearson separation index = 0.97 [5]
3D gait analysis	Spatiotemporal		Sagittal plane: ICC=0.83-0.99 (n=15) [6] Frontal plane: ICC=0.90-0.97 (n=15) [6] Transverse plane: ICC=0.50-0.98 (n=15) [6]		Considered to be the gold standard for determining lower limbs joint kinematics during walking [7]
Instrumented walkways	Spatiotemporal (s, m, m/s)		ICC=0.83-0.97 (n=16) [8]		CSA®-GAITRait®: 0.44-0.99 (n=25) [9] <sup>b</sup>
Inertial measurement units	Spatiotemporal		ICC=0.55-0.94 (n=10) [10] <sup>b</sup>		3D gait analysis: r=0.93-1.0 (n=1166 steps) [10] <sup>c</sup>

<sup>a</sup> no values for patients with SCI available. Values from subjects with neurological movement disorders.

<sup>b</sup> no values for patients with SCI available. Values from control subjects.

<sup>c</sup> no values for patients with SCI available. Values from mixed group (control (n=11) and PD (n=4) subjects).

$\rho$ : Spearman's rank correlation coefficient

r: Pearson correlation coefficient

ICC: intraclass correlation coefficient

10MWT ten meter walk test, 6mWT six minute walk test, 2mWT two minute walk test, TUG timed up and go test, SCAR spinal cord ability ruler