

Online Resource 2. Reliability of kinetic parameter estimates for the 2T4k_V_B_k₄ model

For K₁, k₂ and V_B a cut-off of 25% was used and for k₃ and k₄ a cut-off of 50%. Higher values are highlighted.

A) %SE for K₁

	MS1	MS2	MS3	MS4	MS5	Mean	HC1	HC2	HC3	HC4	HC5	Mean
Frontal cortex	5.5	10.5	12.4	12.6	10.4	10.3	7.6	8.4	10.4	11.9	13.2	10.3
Orbitofrontal cortex	6.6	13.7	14.1	14.1	12.2	12.1	9.0	10.7	10.9	12.3	16.9	12.0
Paracentral cortex	5.8	10.2	11.4	11.0	9.9	9.7	7.4	8.4	9.8	10.8	12.0	9.7
Parietal cortex	6.4	8.7	10.6	10.0	8.9	8.9	6.4	7.6	8.2	10.8	10.9	8.8
Temporal cortex	5.1	9.2	11.9	10.6	8.6	9.1	6.2	8.9	8.4	11.6	10.7	9.2
Occipital cortex	4.6	8.8	8.8	7.2	5.9	7.1	4.1	7.1	6.6	8.4	6.8	6.6
Cingulate cortex	9.9	15.2	12.9	15.6	13.8	13.5	10.2	11.2	13.1	13.9	17.5	13.2
Thalamic GM	10.4	10.8	10.1	8.8	10.6	10.1	3.8	7.1	14.1	11.4	11.2	9.5
Putaminal GM	5.3	12.7	13.3	11.2	12.4	11.0	6.4	14.3	10.8	19.2	12.5	12.6
Caudate nucleus GM	6.2	10.9	13.0	13.8	11.0	11.0	9.2	15.0	15.7	12.2	13.3	13.1
Hippocampal GM	8.3	13.9	15.0	18.5	14.3	14.0	12.0	19.2	12.5	20.3	16.7	16.1
Cerebellar GM	3.6	5.6	7.6	5.7	5.6	5.6	5.8	5.1	5.2	8.8	6.1	6.2
Cerebellar WM	6.0	5.2	6.7	6.1	6.2	6.0	7.1	6.5	7.1	11.1	8.0	8.0
Brainstem WM	8.1	7.9	10.3	8.2	14.3	9.8	15.1	9.8	9.8	13.1	9.5	11.5
Non-lesional WM	6.6	9.6	8.7	8.0	8.6	8.3	8.4	9.1	9.5	11.5	10.6	9.8
T2 MS lesions	6.4	11.0	4.8	5.5	7.7	7.1						
Enhancing MS lesions	8.0	19.4	4.5	4.2		9.0						

B) %SE for K₂

	MS1	MS2	MS3	MS4	MS5	Mean	HC1	HC2	HC3	HC4	HC5	Mean
Frontal cortex	6.9	13.4	15.9	15.6	13.8	13.1	9.9	9.5	12.9	13.9	15.0	12.2
Orbitofrontal cortex	8.3	18.2	18.4	17.5	16.3	15.7	11.6	12.4	13.4	14.2	19.2	14.2
Paracentral cortex	7.4	13.3	14.9	13.9	13.2	12.5	9.7	9.7	12.1	12.8	13.7	11.6
Parietal cortex	8.0	11.3	13.8	12.5	11.7	11.5	8.2	8.8	10.2	12.5	12.2	10.4
Temporal cortex	6.5	12.0	15.6	13.4	11.5	11.8	8.3	10.5	10.7	13.7	12.3	11.1
Occipital cortex	5.7	11.2	11.5	9.0	7.8	9.0	5.2	8.3	8.3	9.8	7.7	7.9
Cingulate cortex	12.8	19.5	17.0	19.8	18.6	17.5	13.7	13.1	16.2	16.4	20.8	16.0
Thalamic GM	12.7	12.8	12.6	10.4	13.4	12.4	4.7	8.0	17.0	13.2	12.3	11.0
Putaminal GM	6.6	15.6	16.0	13.2	15.6	13.4	8.2	15.5	13.1	21.6	13.3	14.3
Caudate nucleus GM	7.4	13.1	15.4	16.9	14.1	13.4	11.0	16.0	18.7	14.1	14.7	14.9
Hippocampal GM	10.7	17.6	19.7	24.6	19.6	18.4	16.5	23.5	16.7	25.4	19.7	20.4
Cerebellar GM	4.5	6.9	9.4	6.9	7.2	7.0	7.1	5.6	6.4	9.8	6.6	7.1
Cerebellar WM	9.3	8.2	10.4	9.1	9.8	9.4	11.7	9.4	11.2	16.3	10.8	11.9
Brainstem WM	11.9	12.1	15.1	11.9	22.0	14.6	25.1	13.3	15.3	19.0	12.7	17.1
Non-lesional WM	10.7	14.9	14.4	12.6	14.8	13.5	14.4	13.5	15.6	17.8	14.8	15.2
T2 MS lesions	10.8	20.8	9.4	9.7	14.9	13.1						
Enhancing MS lesions	14.3	39.2	9.0	8.5		17.8						

C) %SE for K₃

	MS1	MS2	MS3	MS4	MS5	Mean	HC1	HC2	HC3	HC4	HC5	Mean
Frontal cortex	13.2	22.3	20.4	21.2	17.2	18.9	17.1	20.5	21.4	29.8	21.1	22.0
Orbitofrontal cortex	15.0	33.7	24.6	21.6	22.6	23.5	19.8	27.1	23.4	31.0	27.4	25.7
Paracentral cortex	14.2	19.1	19.2	19.2	15.9	17.5	16.0	18.1	18.9	27.9	19.0	20.0
Parietal cortex	14.9	16.6	17.1	16.0	14.2	15.8	13.1	15.7	15.7	25.8	15.7	17.2
Temporal cortex	12.6	21.8	21.0	19.1	16.3	18.2	15.6	21.7	19.6	31.0	17.5	21.1
Occipital cortex	11.0	16.4	14.4	11.6	10.0	12.7	8.0	12.4	12.6	19.9	9.4	12.5
Cingulate cortex	24.1	35.9	23.6	31.3	26.1	28.2	23.8	29.9	30.4	40.7	31.4	31.2
Thalamic GM	31.7	25.9	18.6	19.5	23.4	23.8	13.9	25.6	39.9	53.9	22.8	31.2
Putaminal GM	18.0	36.7	22.2	20.5	26.1	24.7	23.6	43.2	33.7	68.1	24.7	38.7
Caudate nucleus GM	15.1	24.4	17.7	25.9	18.9	20.4	20.5	32.5	32.1	33.5	19.6	27.6
Hippocampal GM	19.5	38.4	27.3	38.1	30.6	30.8	35.8	55.5	36.4	74.6	34.2	47.3
Cerebellar GM	9.3	13.1	11.1	9.3	9.2	10.4	11.6	10.8	12.4	26.5	9.3	14.1
Cerebellar WM	18.7	15.6	18.9	18.0	17.2	17.7	22.8	21.2	19.8	35.0	17.6	23.3
Brainstem WM	23.5	27.2	25.3	20.9	35.2	26.4	51.5	29.1	29.1	48.0	21.1	35.8
Non-lesional WM	18.7	22.6	25.4	24.7	23.2	22.9	21.1	25.5	22.7	30.5	21.9	24.3
T2 MS lesions	18.9	38.5	26.4	24.0	24.1	26.4						
Enhancing MS lesions	39.3	128.3	28.5	35.7		58.0						

D) %SE for V_B

	MS1	MS2	MS3	MS4	MS5	Mean	HC1	HC2	HC3	HC4	HC5	Mean
Frontal cortex	6.5	9.9	10.5	8.9	9.5	9.1	5.1	6.2	8.0	8.3	8.5	7.2
Orbitofrontal cortex	7.9	14.7	11.9	11.6	11.4	11.5	6.6	8.1	9.1	9.6	11.8	9.0
Paracentral cortex	7.2	9.1	9.7	8.1	9.0	8.6	5.2	6.1	8.0	7.6	7.8	6.9
Parietal cortex	7.5	8.7	8.8	7.4	7.7	8.0	4.6	5.3	6.3	6.8	6.9	6.0
Temporal cortex	7.0	9.5	10.7	8.3	8.0	8.7	4.6	6.4	6.9	8.5	7.7	6.8
Occipital cortex	5.0	8.4	6.1	4.4	4.2	5.6	2.6	4.2	4.5	5.0	4.0	4.1
Cingulate cortex	12.1	13.0	10.8	11.7	12.1	11.9	6.3	7.6	10.5	8.4	11.8	8.9
Thalamic GM	13.7	9.9	7.4	8.8	10.4	10.0	3.4	5.5	13.8	8.9	7.5	7.8
Putaminal GM	7.6	13.0	11.6	9.5	12.5	10.8	5.4	11.7	12.5	15.2	10.4	11.0
Caudate nucleus GM	8.5	12.4	11.5	11.2	9.6	10.6	7.8	14.1	16.8	10.4	8.7	11.6
Hippocampal GM	10.7	14.9	15.6	13.0	15.0	13.8	10.0	13.9	11.8	12.6	11.4	11.9
Cerebellar GM	5.0	6.3	5.9	4.4	4.7	5.3	4.4	3.8	4.4	5.3	4.7	4.5
Cerebellar WM	8.6	6.9	8.2	6.9	6.8	7.5	6.5	5.7	7.4	8.2	7.3	7.0
Brainstem WM	14.5	11.4	11.2	9.8	14.5	12.3	11.9	9.4	10.8	10.2	8.8	10.2
Non-lesional WM	10.2	10.6	10.8	9.2	10.0	10.2	6.7	8.2	9.2	9.2	8.8	8.4
T2 MS lesions	11.2	15.2	10.2	8.5	8.6	10.7						
Enhancing MS lesions	17.7	26.1	10.3	12.6		16.7						

Abbreviations: GM = grey matter, HC = healthy control, MS = multiple sclerosis patient, SE = standard error, WM = white matter