

<b>Table e-1 Demographics of controls</b>		
ID Controls	Age (years)	Sex
1	30	M
2	37	M
3	31	M
4	27	M
5	23	M
6	28	F
7	23	M
8	29	F
9	50	F
10	52	M
11	27	F
12	28	F
13	27	F
14	46	M
15	52	M
16	27	F
17	35	M
18	38	M

**Table e-2 Relationship between sub-acute MRI changes at the cord and brain level and two year outcomes, adjusted for age and early clinical change.**

Structural MRI indices	Two year outcome measure	P-Value	R <sup>2</sup>				
			<b>z-score</b>	<b>CE</b>	<b>X (mm)</b>	<b>Y (mm)</b>	<b>Z (mm)</b>
6 months cord area change	LEMS	0.048	0.52				
6 months cord area change	Pin-prick	0.046	0.42				
6 months volume change in CST (medulla oblongata)	LEMS	0.001	4.66	712	-9	-24	-40
6 months volume change in brainstem (pons)	LEMS	0.031	4.41	281	-2	-32	-36
6 months change in MT in right sensorimotor cortex	LEMS	<0.001	4.40	37	26	-39	71
6 months change in MT in left sensorimotor cortex	LEMS	<0.001	3.93	95	-44	-32	63
6 months change in MT in left sensorimotor cortex	LEMS	0.004	3.56	26	-17	-39	74
6 months change in MT left sensorimotor cortex	SCIM	0.007	3.82	24	-29	-48	60
6 months change in MT in right sensorimotor cortex	SCIM	<0.001	3.70	38	53	-24	50
6 months change in R2* in right cerebellum	Pin Prick	0.025	4.50	23	14	-81	-26
6 months change in R2* in right ACC	Pin Prick	0.044	3.79	16	8	39	11
6 months change in R2* in right S2	N. Pain	<0.001	3.94	50	54	-2	-2
6 months change in R2* in right S2	N. Pain	<0.001	3.75	38	44	-6	18
6 months change in R2* in right cerebellum	N. Pain	<0.001	4.52	67	17	-60	-30
6 months change in R2* in right cerebellum	N. Pain	0.016	3.80	25	3	-54	-29
6 months change in R2* in left cerebellum	N. Pain	0.031	3.88	22	-30	-75	-48
6 months change in R2* in left ACC	N. Pain	0.011	3.41	21	-8	41	32

Relationships between sub-acute MRI changes and 2 year outcomes. LEMS= lower extremity motor score. CST= corticospinal tract, MT= magnetization transfer saturation; N. Pain= Neuropathic pain GM= grey matter, WM= white matter; S2= Secondary sensory cortex, CE= Cluster extent. Note that 14 patients were included in the cord and brain volume analysis and 12 patients in the microstructural analysis