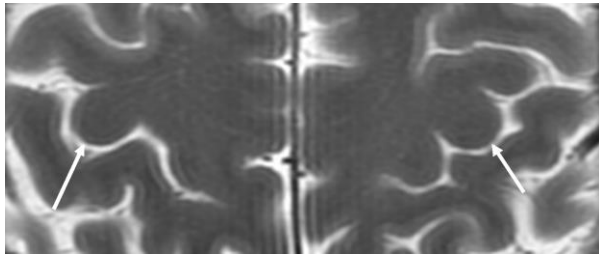
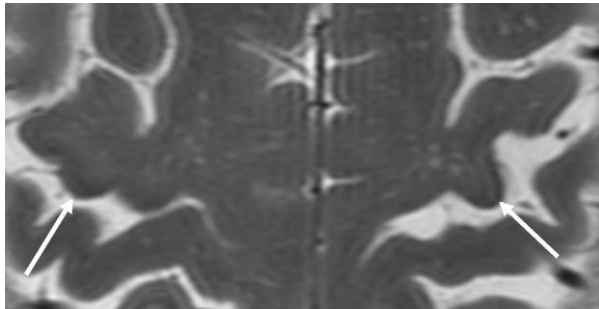


Supplemental Figures:

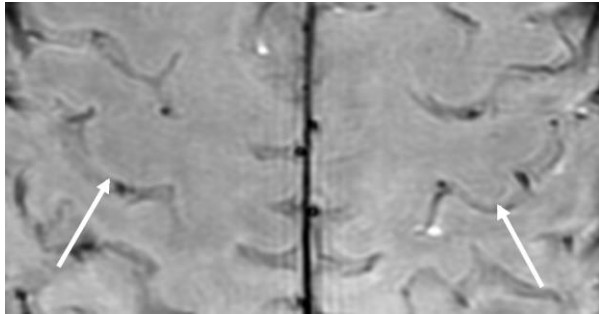


(a)

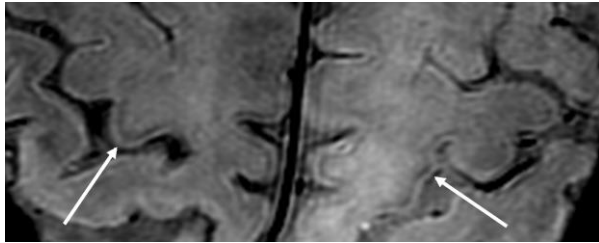


(b)

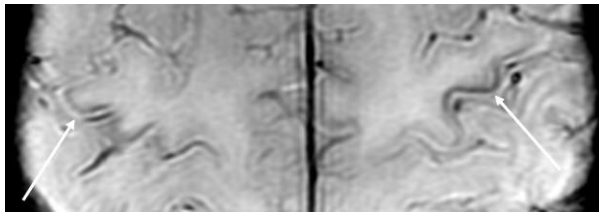
Figure 1S. Characteristic examples of qualitative scores for motor cortex T2 hypointensity; (a) shows a score of “0”, absent hypointensity, in a control patient; and (b) shows a score of “1”, mild hypointensity, in a patient with PLS (patient 7). Of note, none of the MND or control patients demonstrated a qualitative score of “2” (marked hypointensity). Arrows indicate the bilateral motor cortices.



(a)

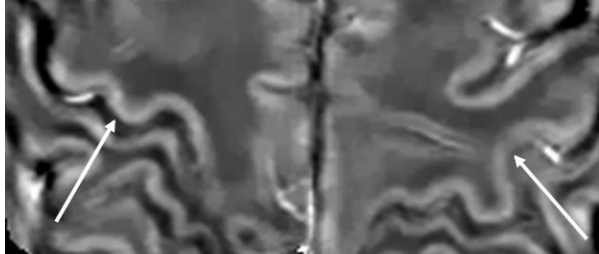


(b)

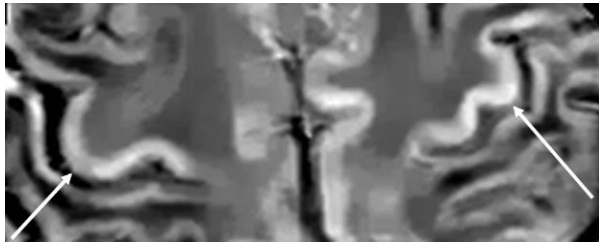


(c)

Figure 2S. Characteristic examples of qualitative scores for motor cortex T2* hypointensity; (a) shows a score of “0”, absent hypointensity, in a control patient; (b) shows a score of “1”, mild hypointensity, in a patient with possible ALS at the time of imaging which became probable ALS on follow-up (patient 2); and (c) shows a score of “2”, marked hypointensity, in a patient with PLS (patient 7). Arrows indicate the bilateral motor cortices.



(a)

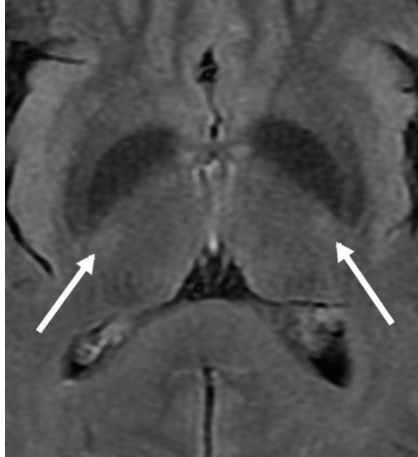


(b)

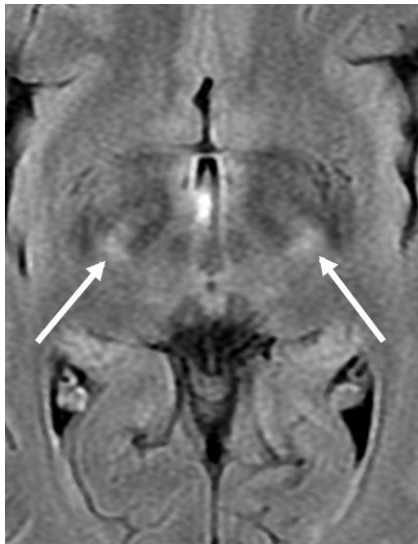


(c)

Figure 3S. Characteristic examples of qualitative scores for motor cortex QSM hyperintensity; (a) shows a score of “0”, slightly more hyperintense motor than sensory cortex, in a control patient; (b) shows a score of “1”, moderately more hyperintense motor than sensory cortex, in a patient with probable ALS (patient 16); and (c) shows a score of “2”, markedly more hyperintense motor than sensory cortex, in a patient with PLS (patient 7). Arrows indicate the bilateral motor cortices.

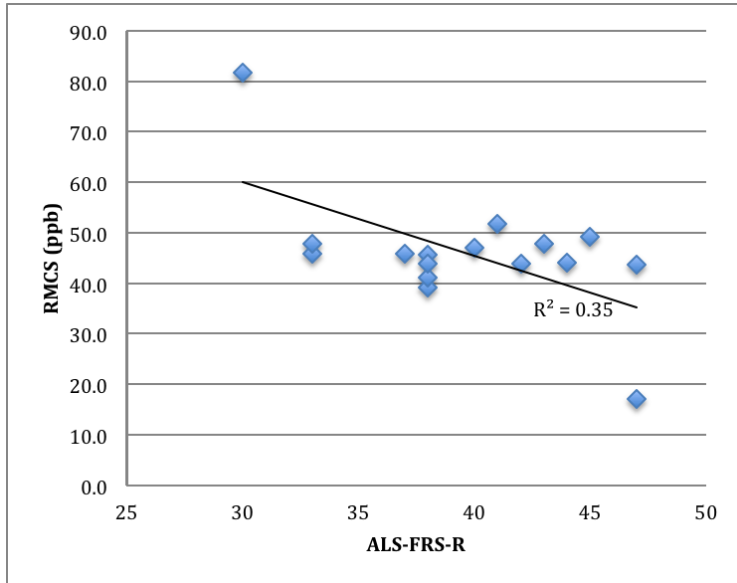


(a)

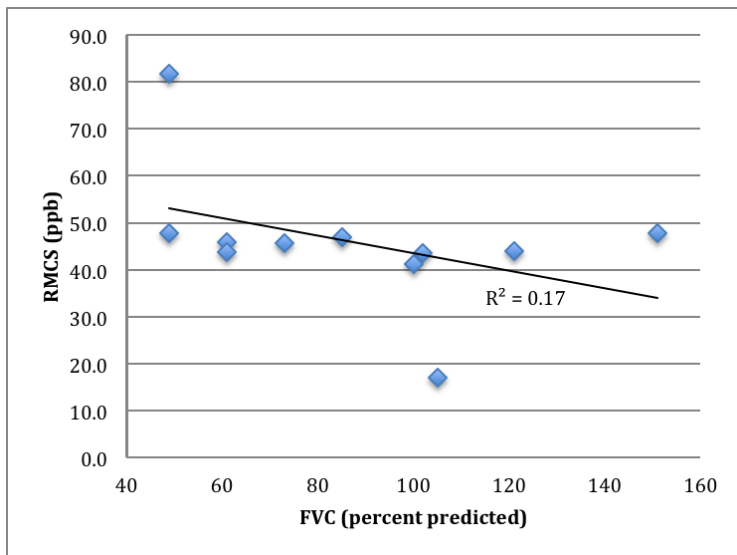


(b)

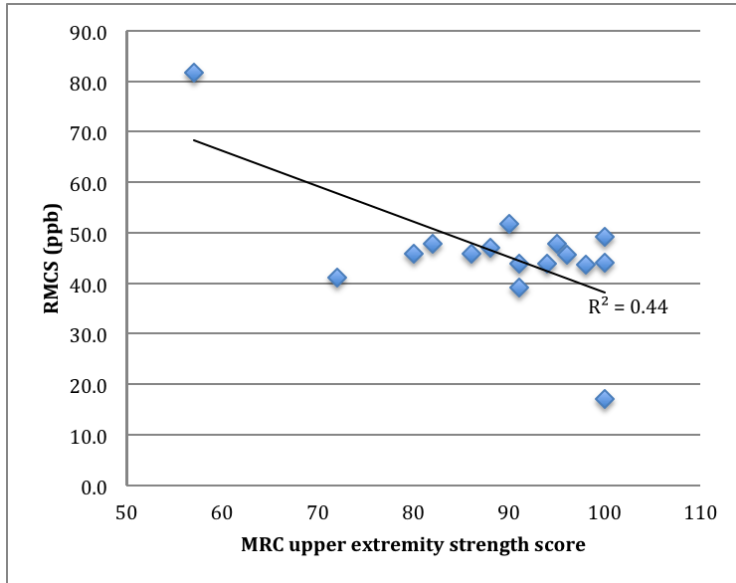
Figure 4S. Characteristic examples of qualitative scores for corticospinal tract T2 FLAIR hyperintensity; (a) shows a score of “0”, absent hyperintensity, in a control patient; and (b) shows a score of “1”, mild hyperintensity, in a patient with definite ALS (patient 1). Of note, none of the MND or control patients demonstrated a qualitative score of “2” (marked hyperintensity). Arrows indicate hyperintensity in the bilateral corticospinal tracts.



(a)



(b)



(c)

Figure 5S. Relative motor cortex susceptibility versus (a) ALS-FRS-R, (b) percent predicted FVC, and (c) MRC upper extremity strength score at time of MRI. Note: RMCS, relative motor cortex susceptibility; ALS-FRS-R, ALS revised functional rating scale; FVC, forced vital capacity; MRC, Medical Research Council.