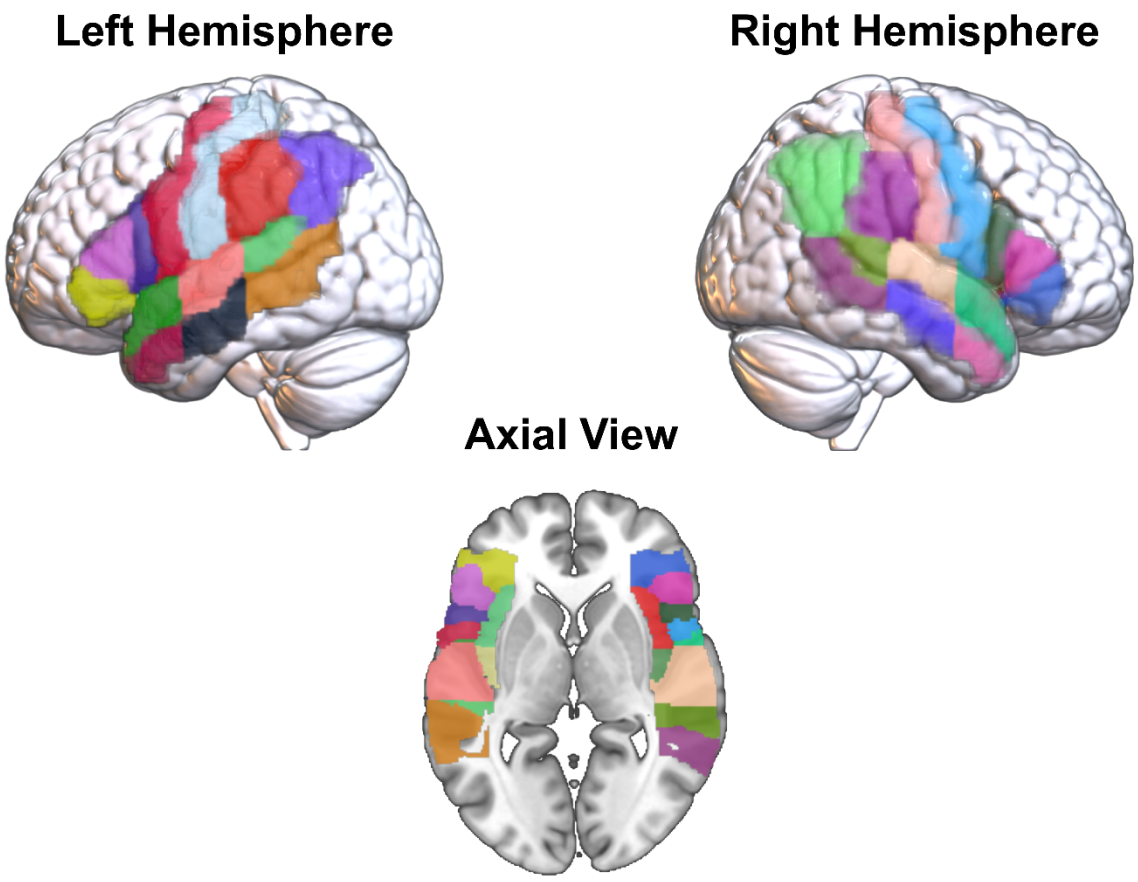
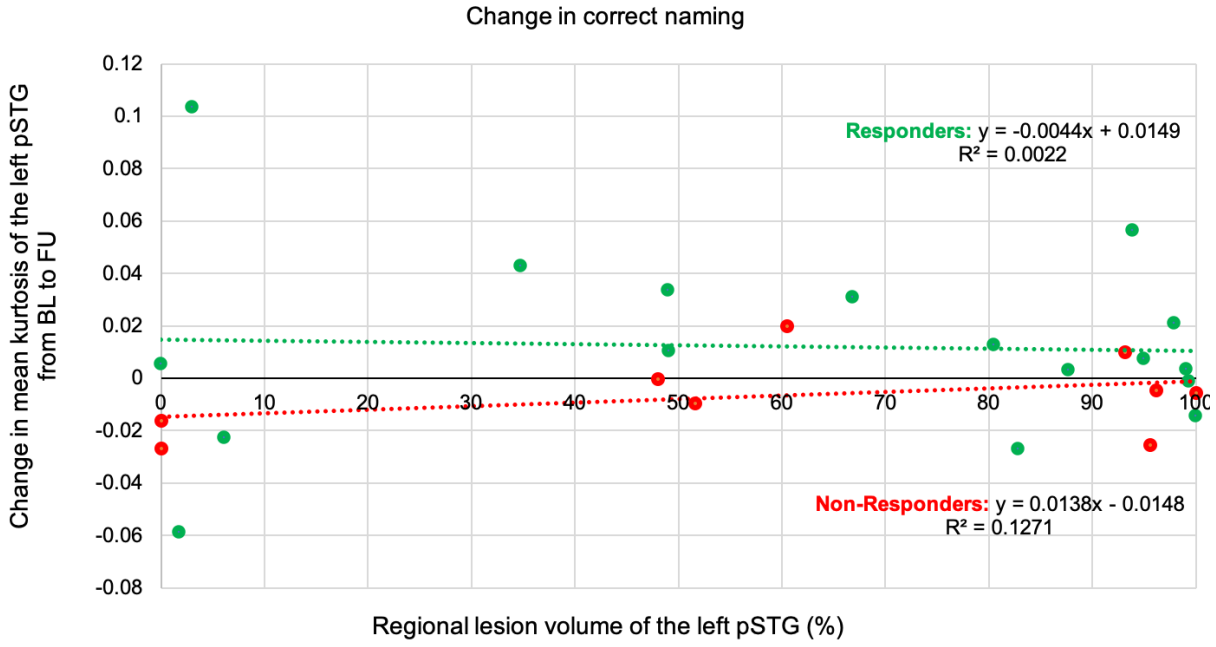
Supplementary Material

For the manuscript:
Cortical microstructural changes associated with treated aphasia recovery

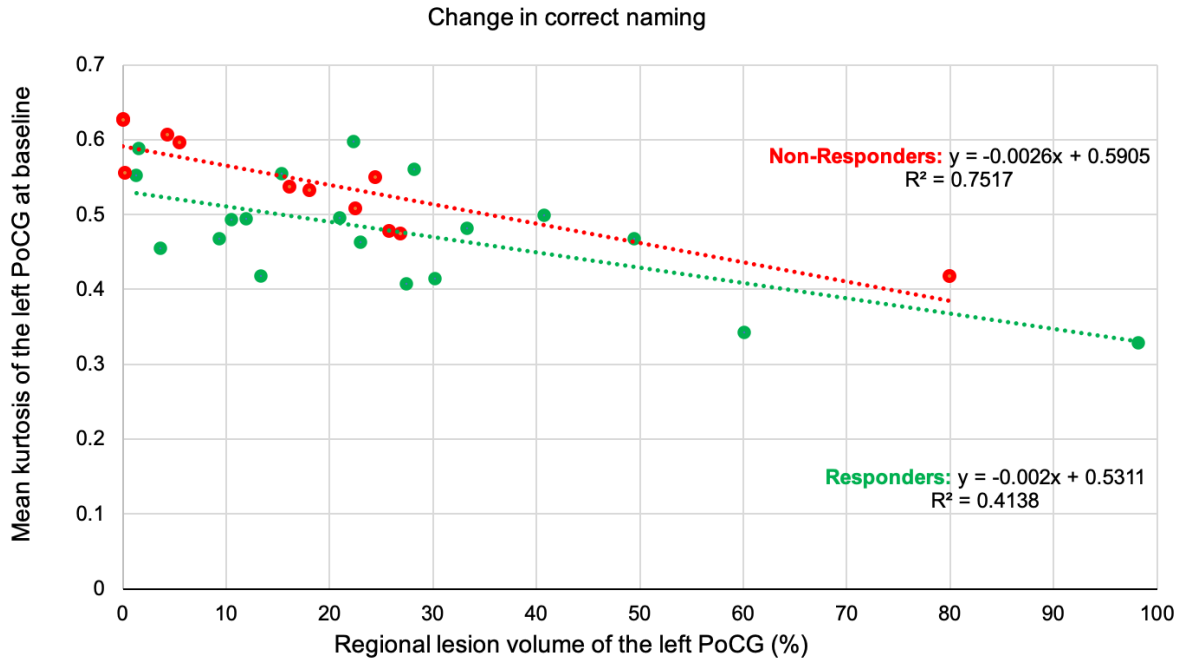
Authors:
Allen J. Chang*, Janina Wilmskoetter*, Julius Fridriksson, Emilie T. McKinnon, Lorelei P. Johnson, Alexandra Basilakos, Jens H. Jensen, Chris Rorden, Leonardo Bonilha
** These authors contributed equally to the work*



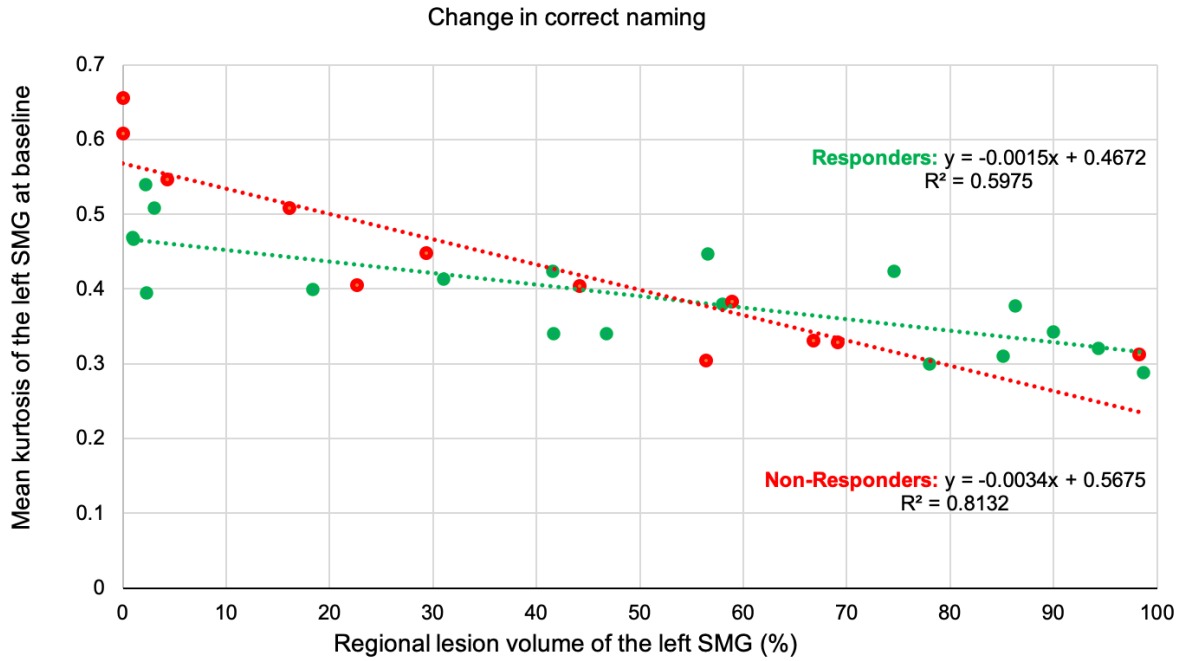
Supplementary Figure 1: Thirty regions of interests defined by the Johns Hopkins University. Regions of interests are associated with the ventral and dorsal stream of language and its right hemisphere homologous structures.



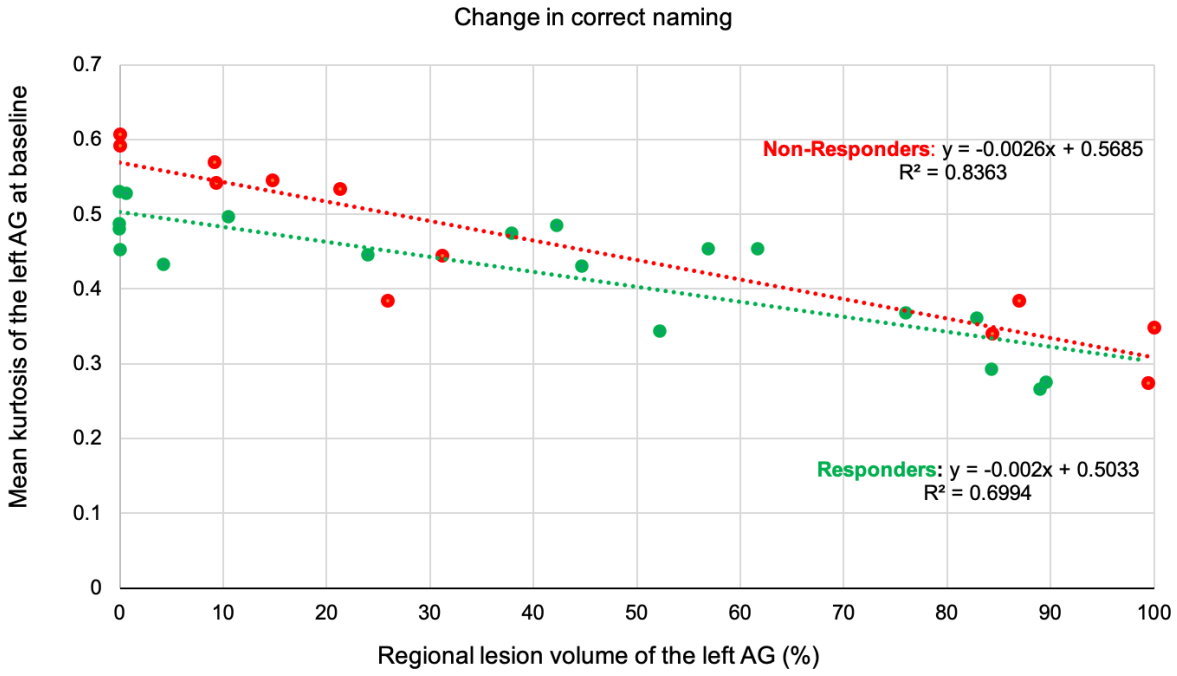
Supplementary Figure 2: Relationship between change in mean kurtosis from baseline to one week after treatment and lesion volume in the posterior superior temporal gyrus (pSTG) for responders (colored in green; participants who produced more correct responses after treatment compared to baseline) and non-responders (colored in red; participants who produced less or equal number of correct responses after treatment compared to baseline).



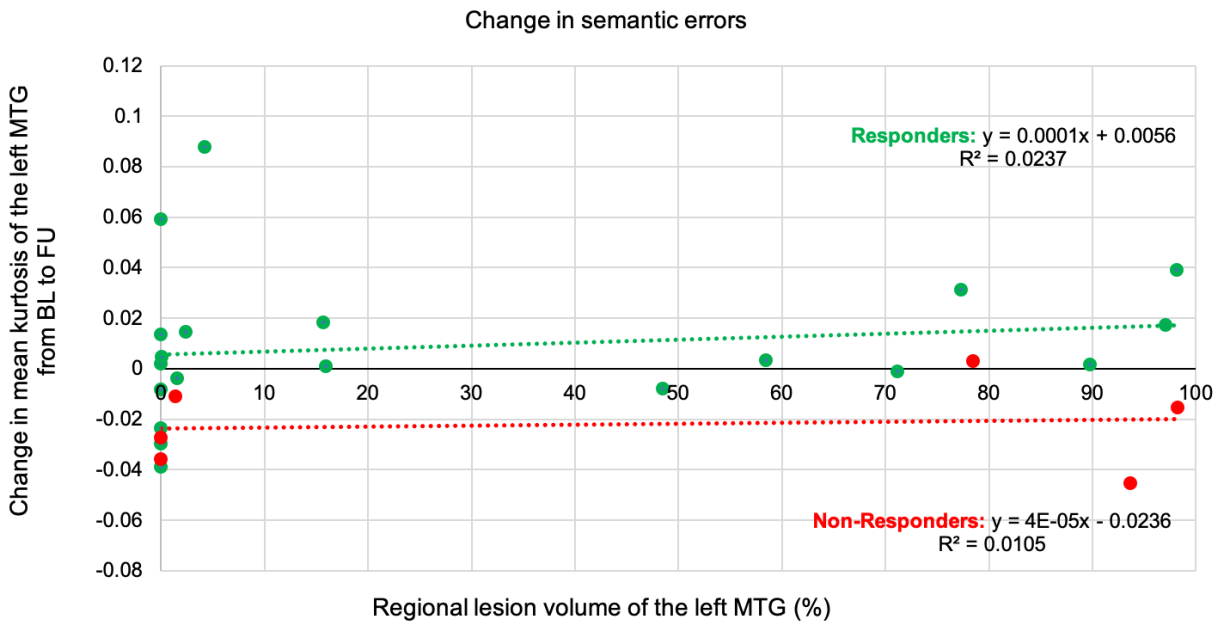
Supplementary Figure 3: Relationship between mean kurtosis at baseline and lesion volume in the precentral gyrus (PoCG) for responders (colored in green; participants who produced more correct responses after treatment compared to baseline) and non-responders (colored in red; participants who produced less or equal number of correct responses after treatment compared to baseline).



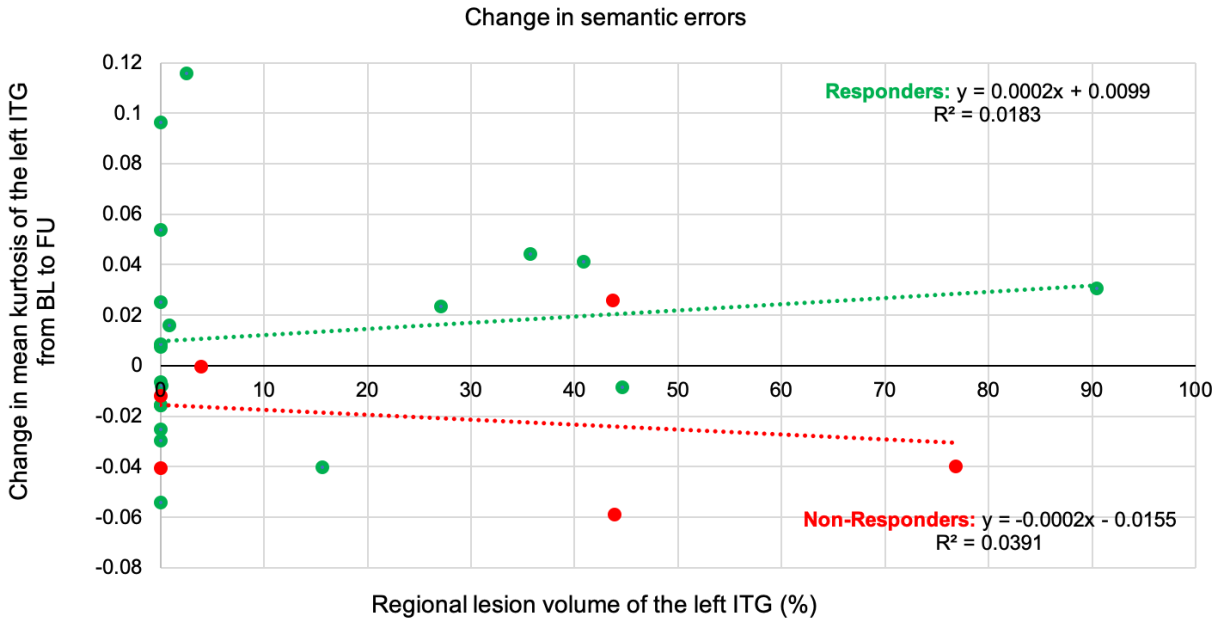
Supplementary Figure 4: Relationship between mean kurtosis at baseline and lesion volume in the supramarginal gyrus (SMG) for responders (colored in green; participants who produced more correct responses after treatment compared to baseline) and non-responders (colored in red; participants who produced less or equal number of correct responses after treatment compared to baseline).



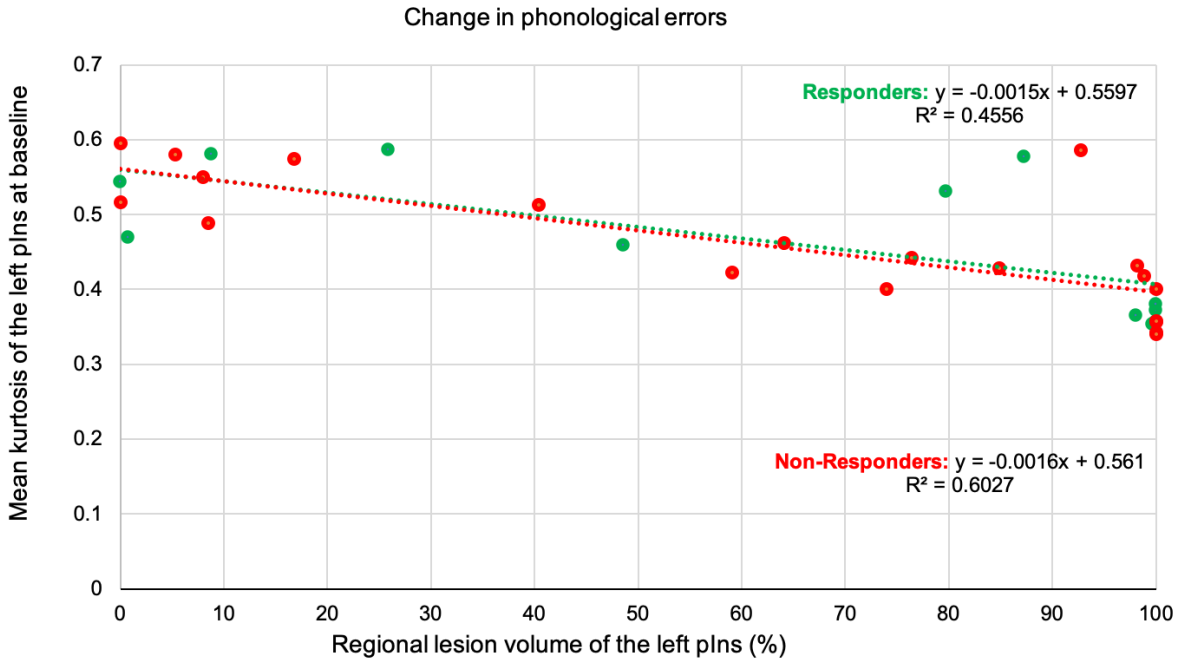
Supplementary Figure 5: Relationship between mean kurtosis at baseline and lesion volume in the angular gyrus (AG) for responders (colored in green; participants who produced more correct responses after treatment compared to baseline) and non-responders (colored in red; participants who produced less or equal number of correct responses after treatment compared to baseline).



Supplementary Figure 6: Relationship between change in mean kurtosis from baseline to one week after treatment and lesion volume in the middle temporal gyrus (MTG) for responders (colored in green; participants who produced less semantic errors after treatment compared to baseline) and non-responders (colored in red; participants who produced more or equal number of semantic errors after treatment compared to baseline).



Supplementary Figure 7: Relationship between change in mean kurtosis from baseline to one week after treatment and lesion volume in the inferior temporal gyrus (ITG) for responders (colored in green; participants who produced less semantic errors after treatment compared to baseline) and non-responders (colored in red; participants who produced more or equal number of semantic errors after treatment compared to baseline).



Supplementary Figure 8: Relationship between change in mean kurtosis from baseline to one week after treatment and lesion volume in the posterior insula (pIns) for responders (colored in green; participants who produced less phonological errors after treatment compared to baseline) and non-responders (colored in red; participants who produced more or equal number of phonological errors after treatment compared to baseline).