



Supplementary Figure 1. Comparison of MRI-derived cortical volumes to terminal cortical histopathology. (A) Longitudinal MRI-derived volume changes in the primary motor cortex (M1), parieto-occipital cortex (POC), and primary visual cortex (V1) in healthy control (blue), pre-symptomatic ICV/IVT treated (green), early symptomatic ICV/IVT treated (orange), advanced symptomatic treated (grey), and untreated CLN5^{-/-} affected (red) sheep. Graphs extracted from Figure 6. * indicates comparison to control, ^ indicates comparison to untreated CLN5^{-/-}. **** $p < 0.0001$, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. **(B)** Representative images of Nissl-stained tissue from M1, POC, and V1 demonstrating the cortical thickness at 24 months of age (terminal endpoint of the study). Scale bar represents 200μm. Mean (± SEM) cortical thicknesses for each group are noted beneath the images. **(C)** Linear relationship between MRI-derived volumes and post-mortem cortical thickness and corresponding Pearson correlation co-efficient (r) and p-value.