## Supplementary Material

## Test-retest reliability of diffusion measures extracted along white matter language fiber bundles using HARDI-based tractography

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Supplementary Figure 1. Bland-Altman Plots for the MD metric in all four fiber bundles, bilaterally. The Y axis represents the mean difference between the measurements at the two timepoints and the X axis represents the mean of these measures. The upper and lower dashed lines represent the two limits of agreements at $\pm 2$ standard-deviations of the mean of differences (i.e. the $95 \%$ confidence interval). The solid line represents the mean of the differences between the two timepoints. The dots represent the individual subjects. $\mathrm{MD}=$ mean diffusivity; $\mathrm{AF}=$ arcuate fasciculus; ILF = inferior longitudinal fasciculus; IFOF = inferior fronto-occipital fasciculus; UF = uncinate fasciculus; $\mathrm{T} 1=$ time $1 ; \mathrm{T} 2=$ time 2.


Supplementary figure 2. Bland-Altman Plots for the AD metric in all four fiber bundles, bilaterally. The Y axis represents the mean difference between the measurements at the two timepoints and the X axis represents the mean of these measures. The upper and lower dashed lines represent the two limits of agreements at $\pm 2$ standard-deviations of the mean of differences (i.e. the $95 \%$ confidence interval). The solid line represents the mean of the differences between the two timepoints. The dots represent the individual subjects. $\mathrm{AD}=$ axial diffusivity; $\mathrm{AF}=$ arcuate fasciculus; ILF = inferior longitudinal fasciculus; IFOF = inferior fronto-occipital fasciculus; UF = uncinate fasciculus; $\mathrm{T} 1=$ time $1 ; \mathrm{T} 2=$ time 2.


Supplementary figure 3. Bland-Altman Plots for the RD metric in all four fiber bundles, bilaterally. The Y axis represents the mean difference between the measurements at the two timepoints and the X axis represents the mean of these measures. The upper and lower dashed lines represent the two limits of agreements at $\pm 2$ standard-deviations of the mean of differences (i.e. the $95 \%$ confidence interval). The solid line represents the mean of the differences between the two timepoints. The dots represent the individual subjects. $\mathrm{RD}=$ radial diffusivity; $\mathrm{AF}=$ arcuate fasciculus; ILF = inferior longitudinal fasciculus; $\mathrm{IFOF}=$ inferior fronto-occipital fasciculus; $\mathrm{UF}=$ uncinate fasciculus; $\mathrm{T} 1=$ time $1 ; \mathrm{T} 2=$ time 2.


Supplementary figure 4. Bland-Altman Plots for the NuFO measure in all four fiber bundles, bilaterally. The Y axis represents the mean difference between the measurements at the two timepoints and the X axis represents the mean of these measures. The upper and lower dashed lines represent the two limits of agreements at $\pm 2$ standard-deviations of the mean of differences (i.e. the $95 \%$ confidence interval). The solid line represents the mean of the differences between the two timepoints. The dots represent the individual subjects. $\mathrm{NuFO}=$ Number of fiber orientations; $\mathrm{AF}=$ arcuate fasciculus; ILF = inferior longitudinal fasciculus; IFOF = inferior fronto-occipital fasciculus; UF = uncinate fasciculus; $\mathrm{T} 1=$ time $1 ; \mathrm{T} 2=$ time 2.


Supplementary figure 5. Bland-Altman Plots for the Volume measure in all four fiber bundles, bilaterally. The Y axis represents the mean difference between the measurements at the two timepoints and the X axis represents the mean of these measures. The upper and lower dashed lines represent the two limits of agreements at $\pm 2$ standard-deviations of the mean of differences (i.e. the $95 \%$ confidence interval). The solid line represents the mean of the differences between the two timepoints. The dots represent the individual subjects. AF = arcuate fasciculus; ILF = inferior longitudinal fasciculus; IFOF $=$ inferior fronto-occipital fasciculus; $\mathrm{UF}=$ uncinate fasciculus; $\mathrm{T} 1=$ time $1 ; \mathrm{T} 2=$ time 2 .


Supplementary figure 6. Bland-Altman Plots for the MLS measure in all four fiber bundles, bilaterally. The Y axis represents the mean difference between the measurements at the two timepoints and the X axis represents the mean of these measures. The upper and lower dashed lines represent the two limits of agreements at $\pm 2$ standard-deviations of the mean of differences (i.e. the $95 \%$ confidence interval). The solid line represents the mean of the differences between the two timepoints. The dots represent the individual subjects. MLS = mean length of streamlines; AF = arcuate fasciculus; ILF = inferior longitudinal fasciculus; IFOF = inferior fronto-occipital fasciculus; UF = uncinate fasciculus; $\mathrm{T} 1=$ time $1 ; \mathrm{T} 2=$ time 2.

