

## Supplementary Information

**Supplementary Table 1.** Scanner protocols by each research center.

**Supplementary Table 2.** Results of t-test for age differences, and chi-squared test for sex differences at each research center.

**Supplementary Table 3.** Average age of onset and duration of illness per research center.

**Supplementary Table 4.** Multivariate tests.

**Supplementary Figure 1.** RD effect size graphs.

**Supplementary Figure 2.** AD effect size graphs.

**Supplementary Table 5.** Effect sizes for FA differences between healthy controls and the ‘All Epilepsies’ syndrome.

**Supplementary Table 6.** Effect sizes for FA differences between healthy controls and the ‘L TLE-HS’ syndrome.

**Supplementary Table 7.** Effect sizes for FA differences between healthy controls and the ‘R TLE-HS’ syndrome.

**Supplementary Table 8.** Effect sizes for FA differences between healthy controls and the ‘L TLE-NL’ syndrome.

**Supplementary Table 9.** Effect sizes for FA differences between healthy controls and the ‘R TLE-NL’ syndrome.

**Supplementary Table 10.** Effect sizes for FA differences between healthy controls and the ‘GGE’ syndrome.

**Supplementary Table 11.** Effect sizes for FA differences between healthy controls and the ‘ExE’ syndrome.

**Supplementary Table 12.** Effect sizes for MD differences between healthy controls and the ‘All Epilepsies’ syndrome.

**Supplementary Table 13.** Effect sizes for MD differences between healthy controls and the ‘L TLE-HS’ syndrome.

**Supplementary Table 14.** Effect sizes for MD differences between healthy controls and the ‘R TLE-HS’ syndrome.

**Supplementary Table 15.** Effect sizes for MD differences between healthy controls and the ‘L TLE-NL’ syndrome.

**Supplementary Table 16.** Effect sizes for MD differences between healthy controls and the ‘R TLE-NL’ syndrome.

**Supplementary Table 17.** Effect sizes for MD differences between healthy controls and the ‘GGE’ syndrome.

**Supplementary Table 19.** Effect sizes for MD differences between healthy controls and the ‘ExE’ syndrome.

**Supplementary Table 20.** Effect sizes for RD differences between healthy controls and the ‘All Epilepsies’ syndrome.

**Supplementary Table 21.** Effect sizes for RD differences between healthy controls and the ‘L TLE-HS’ syndrome.

**Supplementary Table 22.** Effect sizes for RD differences between healthy controls and the ‘R TLE-HS’ syndrome.

**Supplementary Table 23.** Effect sizes for RD differences between healthy controls and the ‘L TLE-NL’ syndrome.

**Supplementary Table 24.** Effect sizes for RD differences between healthy controls and the ‘R TLE-NL’ syndrome.

**Supplementary Table 25.** Effect sizes for RD differences between healthy controls and the ‘GGE’ syndrome.

**Supplementary Table 26.** Effect sizes for RD differences between healthy controls and the ‘ExE’ syndrome.

**Supplementary Table 27.** Effect sizes for AD differences between healthy controls and the ‘All Epilepsies’ syndrome.

**Supplementary Table 28.** Effect sizes for AD differences between healthy controls and the ‘L TLE-HS’ syndrome.

**Supplementary Table 29.** Effect sizes for AD differences between healthy controls and the ‘R TLE-HS’ syndrome.

**Supplementary Table 30.** Effect sizes for AD differences between healthy controls and the ‘L TLE-NL’ syndrome.

**Supplementary Table 31.** Effect sizes for AD differences between healthy controls and the ‘R TLE-NL’ syndrome.

**Supplementary Table 32.** Effect sizes for AD differences between healthy controls and the ‘GGE’ syndrome.

**Supplementary Table 33.** Effect sizes for AD differences between healthy controls and the ‘ExE’ syndrome.

**Supplementary Table 34.** Relationship between FA and age of disease onset by syndrome.

**Supplementary Table 35.** Relationship between FA and disease duration by syndrome.

**Supplementary Table 36.** Relationship between MD and age of disease onset by syndrome.

**Supplementary Table 37.** Relationship between MD and disease duration by syndrome.

**Supplementary Table 38.** Relationship between RD and age of disease onset by syndrome.

**Supplementary Table 39.** Relationship between RD and disease duration by syndrome.

**Supplementary Table 40.** Relationship between AD and age of disease onset by syndrome.

**Supplementary Table 41.** Relationship between AD and disease duration by syndrome.

**Supplementary Table 1.** Scanner protocols by each research center. An asterisk (\*) indicates a variable TR due to cardiac gating.

Center	Scanner	Orientation	# of Slices	Voxel Size (mm3)	Gradient Directions	b-value (mm/s2)	# b=0 scans	TE (ms)	TR (ms)	Relevant Citation
Bonn	Siemens Trio	Axial	160	1 x 1 x 1	60	1000	7	3.97	1300	Kreilkamp, B. A., Weber, B., Richardson, M. P., & Keller, S. S. (2017). Automated tractography in patients with temporal lobe epilepsy using TRAacts Constrained by Underlying Anatomy (TRACULA). <i>NeuroImage: Clinical</i> , 14, 67-76. doi:10.1016/j.nicl.2017.01.003
CUBRIC	GE Signa HDx	-	60	2.4 mm slice thickness	30	1200	3	87	*	Caeyenberghs, K., Powell, H., Thomas, R., Brindley, L., Church, C., Evans, J., . . . Hamandi, K. (2015). Hyperconnectivity in juvenile myoclonic epilepsy: A network analysis. <i>NeuroImage: Clinical</i> , 7, 98-104. doi:10.1016/j.nicl.2014.11.018
EKUT	Siemens Trio	-	52	1.81 x 1.81 x 1.79	48	1200 (2x)	6 (2x)	93	9400	-
EPICZ	GE Discovery MR750	Axial	80	2 x 2 x 2	27	1000	4	81.4	10000	Caligiuri, M. E., Labate, A., Cherubini, A., Mumoli, L., Ferlazzo, E., Aguglia, U., . . . Gambardella, A. (2016). Integrity of the corpus callosum in patients with benign temporal lobe epilepsy. <i>Epilepsia</i> , 57(4), 590-596. doi:10.1111/epi.13339
EPIGEN-Ireland	Philips Achieva	Axial	70	1.75 x 1.75 x 2	32	1000	-	52	12786	Whelan, C. D., Alhusaini, S., Ohanlon, E., Cheung, M., Iyer, P. M., Meaney, J. F., . . . Cavalleri, G. L. (2015). White matter alterations in patients with MRI-negative temporal lobe epilepsy and their asymptomatic siblings. <i>Epilepsia</i> , 56(10), 1551-1561. doi:10.1111/epi.13103
Florence	Philips Achieva	-	69	2 x 2 x 2	32	1000	1	80	4000	-
Genova	Philips Ingenia	Axial	65	2 x 2 x 2	64	1000	1	90	7000	Domin, M., Bartels, S., Geithner, J., Wang, Z. I., Runge, U., Grothe, M., . . . Podewils, F. V. (2018). Juvenile Myoclonic Epilepsy Shows Potential Structural White Matter Abnormalities: A TBSS
Greifswald	Siemens Verio	-	80	1.8 x 1.8 x 1.8	64	1000	1	107	15300	

<b>Henry Ford</b>	GE Signa	Axial	60	1.96 × 1.96 × 2.6	25	1000	1	76	7500				Study. <i>Frontiers in Neurology</i> , 9. doi:10.3389/fneur.2018.00509
<b>IDIBAPS_31DIR</b>	Siemens Trio	Axial	55	2.4 x 2.4 x 2.4	30	1000	1	90	6900				Nazem-Zadeh, M., Bowyer, S. M., Moran, J. E., Davoodi-Bojd, E., Zillgitt, A., Weiland, B. J., . . . Soltanian-Zadeh, H. (2016). MEG Coherence and DTI Connectivity in mTLE. <i>Brain Topography</i> , 29(4), 598-622. doi:10.1007/s10548-016-0488-0
<b>IDIBAPS_39DIR</b>	Siemens Trio	Axial	64	1.97 x 1.97 x 2	36	1000	3	88	8138				Córdova-Palomera, A., Reus, M. A., Fatjó-Vilas, M., Falcón, C., Bargalló, N., Heuvel, M. P., & Fàñanás, L. (2016). FKBP5 modulates the hippocampal connectivity deficits in depression: A study in twins. <i>Brain Imaging and Behavior</i> , 11(1), 62-75. doi:10.1007/s11682-015-9503-4
<b>IDIBAPS_88DIR</b>	Siemens Trio	Axial	55	1.25 x 1.25 x 2.5	82	1000	6	98	7600				Aparicio, J., Carreño, M., Bargalló, N., Setoain, X., Rubí, S., Rumià, J., . . . Donaire, A. (2016). Combined 18F-FDG-PET and diffusion tensor imaging in mesial temporal lobe epilepsy with hippocampal sclerosis. <i>NeuroImage: Clinical</i> , 12, 976-989. doi:10.1016/j.nicl.2016.05.002
<b>KCL</b>	GE Discovery MR750	Axial	66	2.4 x 2.4 x 2.4	32	1000	6	75	*				Kreilkamp, B. A., Weber, B., Richardson, M. P., & Keller, S. S. (2017). Automated tractography in patients with temporal lobe epilepsy using TRActS Constrained by UnderLyng Anatomy (TRACULA). <i>NeuroImage: Clinical</i> , 14, 67-76. doi:10.1016/j.nicl.2017.01.003
<b>Liverpool_Walton</b>	GE Discovery MR750	Axial	66	1 x 1 x 2	60	1000	6	82	8000				Liu, M., Bernhardt, B. C., Hong, S., Caldairou, B., Bernasconi, A., & Bernasconi, N. (2016). The superficial white matter in temporal lobe epilepsy: A key link between structural and functional network disruptions. <i>Brain</i> , 139(9), 2431-2440. doi:10.1093/brain/aww167
<b>MNI</b>	Siemens Trio	Axial	63	2 x 2 x 2	64	1000	1	90	8400				
<b>NYU</b>	Siemens Allegra	Axial	60	2.5 x 2.5 x 2.5	64	3000	8	99	7900				-

<b>Melbourne</b>	Siemens Trio	Axial	55	2.5 x 2.5 x 2.5	64	3000	1	122	8700	-
<b>UCL</b>	GE Signa HDx	Axial	60	1.875x1.875x2.4	52	1200	6	73	*	Taylor, P. N., Sinha, N., Wang, Y., Vos, S. B., Tisi, J. D., Miserocchi, A., . . . Duncan, J. S. (2018). The impact of epilepsy surgery on the structural connectome and its relation to outcome. <i>NeuroImage: Clinical</i> , 18, 202-214. doi:10.1016/j.nicl.2018.01.028
<b>UCSD</b>	GE Discovery MR750	Axial	53	1.86 x 1.86 x 2.5	30	1000	2	82.9	8000	Reyes, A., Paul, B. M., Marshall, A., Chang, Y. A., Bahrami, N., Kansal, L., . . . McDonald, C. R. (2018). Does bilingualism increase brain or cognitive reserve in patients with temporal lobe epilepsy? <i>Epilepsia</i> , 59(5), 1037-1047. doi:10.1111/epi.14072
<b>UMG</b>	Siemens Trio	-	31	1.89 x 1.89 x 1.89	30	1000	1	93	10000	Bonilha, L., Gleichgerrcht, E., Fridriksson, J., Rorden, C., Breedlove, J. L., Nesland, T., . . . Focke, N. K. (2015). Reproducibility of the Structural Brain Connectome Derived from Diffusion Tensor Imaging. <i>Plos One</i> , 10(9). doi:10.1371/journal.pone.0135247
<b>UNAM</b>	Philips Achieva	-	-	2 x 2 x 2	60	2000	1	64.3	11860	Rodríguez-Cruces, R., Velázquez-Pérez, L., Rodríguez-Leyva, I., Velasco, A. L., Trejo-Martínez, D., Barragán-Campos, H. M., . . . Concha, L. (2018). Association of white matter diffusion characteristics and cognitive deficits in temporal lobe epilepsy. <i>Epilepsy &amp; Behavior</i> , 79, 138-145. doi:10.1016/j.yebeh.2017.11.040
<b>UNICAMP</b>	Philips Achieva	Axial	70	2 x 2 x 2	32	1000	1	61	8500	Campos, B. M., Coan, A. C., Beltramini, G. C., Liu, M., Yassuda, C. L., Ghizoni, E., . . . Cendes, F. (2014). White matter abnormalities associate with type and localization of focal epileptogenic lesions. <i>Epilepsia</i> , 56(1), 125-132. doi:10.1111/epi.12871

**Supplementary Table 2.** Results of t-test for age differences, and chi-squared test for sex differences at each research center.

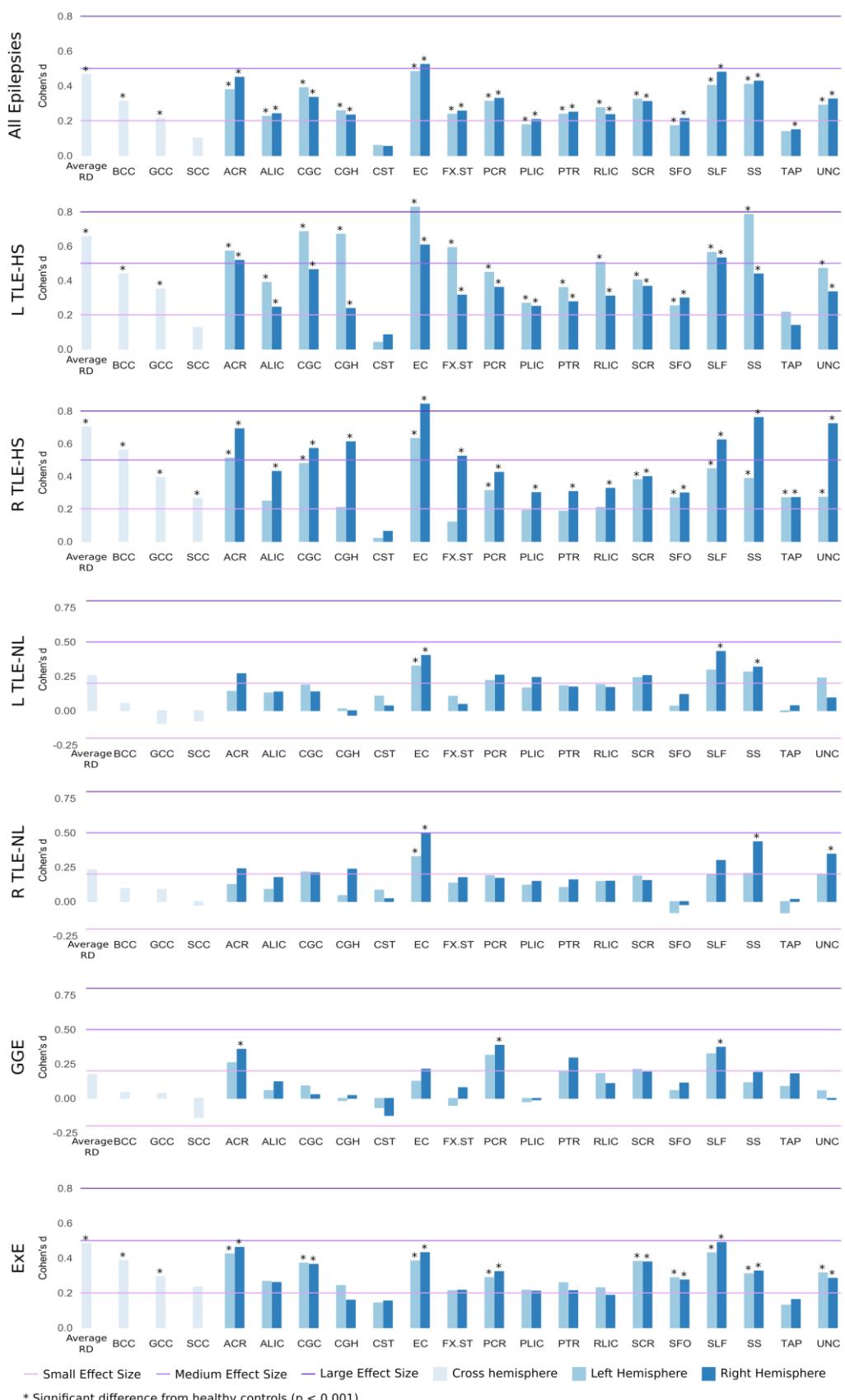
Site	T-test for age differences				Chi squared test for sex differences	
	Difference of means	Standard error	T-statistic	P-value	Pearson chi-squared value	P-value
Bonn	3.81	2.65	-1.44	0.15	0.59	0.44
CUBRIC	0.39	1.94	-0.20	0.84	0.01	0.94
EKUT	-6.08	4.80	1.27	0.22	0.68	0.41
EPICZ	-0.31	1.40	0.22	0.83	3.92	0.05
EPIGEN_Ireland	1.15	1.67	-0.69	0.49	5.24	0.02
Florence	3.02	5.14	-0.59	0.57	0.32	0.57
Genova	0.00	2.60	0.00	1.00	0.00	1.00
Greifswald	-	-	-	-	-	-
HFHS_2.6mm	8.75	2.09	-4.19	9.3E-05	2.97	0.08
HFHS_3mm	-	-	-	-	-	-
IDIBAPS_31DIR	-	-	-	-	-	-
IDIBAPS_39DIR	0.96	1.79	-0.48	0.63	2.00	0.16
IDIBAPS_88DIR	3.47	1.73	-2.01	0.05	0.14	0.70
KCL	4.64	1.27	-3.64	0.00	0.92	0.34
LiverpoolWalton	-0.74	2.10	0.35	0.72	0.10	0.75
Melbourne	-	-	-	-	-	-
MNI	1.32	1.32	-0.99	0.32	0.14	0.71
MUSC	-18.50	2.00	9.25	3.4E-14	1.92	0.17
NYU	2.27	2.36	-0.96	0.34	0.32	0.57
UCL	1.00	2.78	-0.36	0.72	0.10	0.75
UCSD	-3.26	2.53	1.29	0.20	0.37	0.54
UMG	-1.94	2.77	0.70	0.49	0.82	0.36
UNAM	-2.26	2.89	0.78	0.44	0.28	0.59
UNICAMP	5.04	0.89	-5.66	2.5E-08	0.27	0.60

**Supplementary Table 3.** Average age of onset and duration of illness per research center.

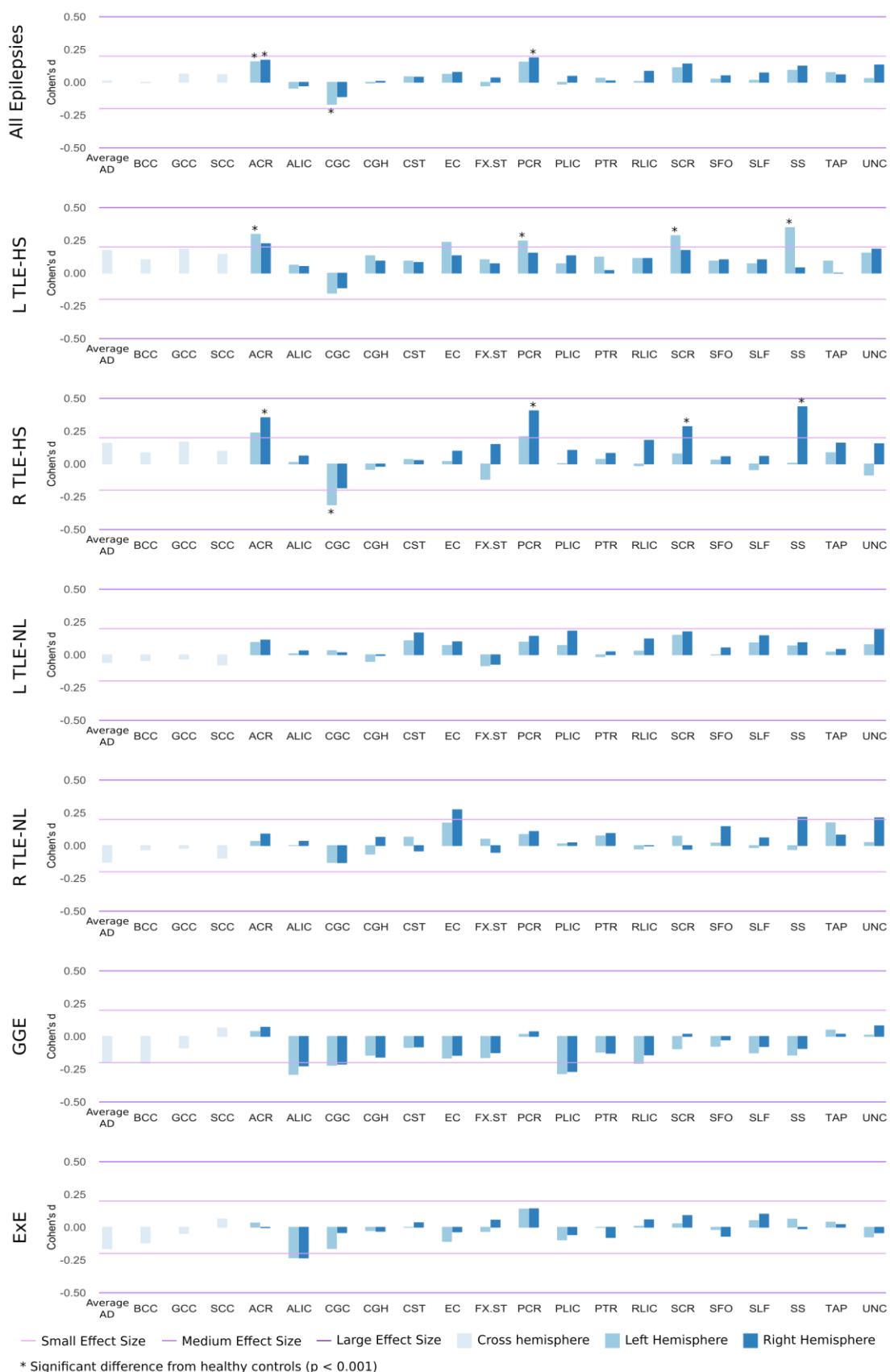
Site	Age of Onset							Duration of Illness						
	All Epilepsies	GGE	TLE-HS L	TLE-HS R	TLE-NL L	TLE-NL R	ExE	All Epilepsies	GGE	TLE-HS L	TLE-HS R	TLE-NL L	TLE-NL R	ExE
Bonn	17.7	-	18.3	16.5	-	-	-	23.8	-	23.5	24.6	-	-	-
CUBRIC	14.7	14.7	-	-	-	-	-	14.0	14.0	-	-	-	-	-
EKUT	19.3	19.3	-	-	-	-	-	14.6	14.6	-	-	-	-	-
EPICZ	19.1	-	19.4	17.5	17.5	25.7	-	19.2	-	18.3	23.9	19.7	13.4	-
EPIGEN_Ireland	19.1	-	20.2	13.3	20.2	16.4	-	18.1	-	20.7	25.7	15.7	18.5	-
Florence	14.0	-	-	-	-	14.0	14.0	19.0	-	-	-	-	22.5	15.5
Genova	10.4	12.1	-	5.0	11.0	7.3	10.0	14.7	16.4	-	13.0	12.0	11.3	9.5
Greifswald	19.2	14.5	-	-	-	-	30.2	15.4	14.8	-	-	-	-	18.0
HFHS_2.6mm	19.0	-	13.2	8.3	18.8	22.7	17.4	19.0	-	21.3	28.4	20.9	19.3	19.6
HFHS_3mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IDIBAPS_31Dir	22.5	8.0	22.3	24.1	17.7	16.0	24.3	16.4	13.0	17.3	17.4	20.7	27.0	13.6
IDIBAPS_39Dir	16.9	-	18.5	18.0	-	17.0	14.0	17.6	-	27.0	12.2	-	28.0	12.5
IDIBAPS_88Dir	15.6	-	15.5	16.3	19.3	14.0	16.8	22.0	-	25.5	17.5	20.0	24.7	11.7
KCL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LiverpoolWalton	14.3	19.0	9.0	15.7	14.0	19.6	11.4	16.7	9.0	24.8	23.2	14.6	8.0	17.6
Melbourne	22.4	-	15.2	31.4	26.8	28.0	-	14.8	-	20.8	8.4	7.0	9.0	-
MNI	16.4	-	14.6	14.3	21.8	18.8	15.4	15.4	-	17.1	24.2	14.0	13.2	12.8
MUSC	18.8	-	14.9	21.6	20.8	24.0	-	18.2	-	20.8	13.6	18.3	14.8	-
NYU	24.0	-	19.5	10.0	30.6	28.7	22.8	8.6	-	13.0	13.5	7.3	2.7	9.1
UCL	13.9	-	12.0	11.3	22.5	16.9	-	24.7	-	26.4	30.1	13.3	20.5	-
UCSD	19.6	-	20.9	19.8	17.3	19.9	-	15.2	-	15.1	16.0	17.4	13.5	-
UMG	16.6	15.3	31.0	9.3	-	-	20.4	15.6	16.3	11.0	10.0	-	-	15.6
UNAM	15.8	-	16.4	12.5	17.9	16.0	-	15.5	-	17.6	21.0	13.4	2.5	-
UNICAMP	12.3	13.5	10.0	13.4	10.3	17.5	10.1	28.3	22.8	31.6	30.5	26.9	25.0	23.5
Weighted Average	16.6	14.8	14.5	15.3	18.8	19.5	17.6	19.9	16.8	24.4	24.4	17.0	15.6	15.1

**Supplementary Table 4. Multivariate tests.** Increasing values of Pillai's trace indicate effects that contribute more to the model.

Measure	Effect	Pillai's Trace	F	Hypothesis df	Error df	Sig.	Partial $\eta^2$	Observed Power
FA	Diagnosis	0.44	4.70	228	13452	<0.001	0.074	1.0
	Age	0.05	2.90	38	2237	<0.001	0.047	1.0
	Age <sup>2</sup>	0.04	2.33	38	2237	<0.001	0.038	1.0
	Sex	0.14	9.27	38	2237	<0.001	0.136	1.0
	Sex*Diagnosis	0.13	1.33	228	13416	0.001	0.022	1.0
MD	Diagnosis	0.31	2.80	228	11688	<0.001	0.052	1.0
	Age	0.07	3.67	38	1943	<0.001	0.067	1.0
	Age <sup>2</sup>	0.05	2.94	38	1943	<0.001	0.054	1.0
	Sex	0.12	6.77	38	1943	<0.001	0.117	1.0
	Sex*Diagnosis	0.13	1.08	228	11652	0.870	0.021	1.0
AD	Diagnosis	0.22	1.96	228	11946	<0.001	0.036	1.0
	Age	0.07	4.05	38	1986	<0.001	0.072	1.0
	Age <sup>2</sup>	0.05	2.98	38	1986	<0.001	0.054	1.0
	Sex	0.10	5.77	38	1986	<0.001	0.099	1.0
	Sex*Diagnosis	0.12	1.07	228	11910	0.215	0.020	1.0
RD	Diagnosis	0.36	3.28	228	11790	<0.001	0.060	1.0
	Age	0.07	4.16	38	1960	<.001	0.075	1.0
	Age <sup>2</sup>	0.06	3.58	38	1960	<.001	0.065	1.0
	Sex	0.11	6.65	38	1960	<.001	0.114	1.0
	Sex*Diagnosis	0.13	1.18	228	11754	0.033	0.022	1.0



Supplementary Figure 1. RD effect size graphs.



**Supplementary Figure 2.** AD effect size graphs.

**Supplementary Table 5.** Effect sizes for FA differences between healthy controls and the ‘All Epilepsies’ syndrome.

ROI	Mean FA controls	Mean FA patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageFA	0.585	0.569	-0.71	-0.79	-0.62	0.04	-24.62	2.3E-59
BCC	0.690	0.668	-0.59	-0.68	-0.51	0.04	-20.69	1.3E-45
GCC	0.695	0.674	-0.59	-0.68	-0.51	0.04	-20.66	1.5E-43
SCC	0.762	0.752	-0.36	-0.44	-0.27	0.04	-12.40	4.9E-17
ACR.L	0.479	0.463	-0.50	-0.58	-0.41	0.04	-17.31	3.0E-32
ACR.R	0.484	0.467	-0.52	-0.60	-0.43	0.04	-17.99	1.2E-33
ALIC.L	0.600	0.587	-0.48	-0.56	-0.39	0.04	-16.61	7.0E-26
ALIC.R	0.607	0.597	-0.34	-0.42	-0.25	0.04	-11.76	1.8E-15
CGC.L	0.648	0.624	-0.57	-0.65	-0.48	0.04	-19.73	2.7E-38
CGC.R	0.604	0.583	-0.50	-0.59	-0.42	0.04	-17.62	8.3E-34
CGH.L	0.553	0.527	-0.52	-0.60	-0.43	0.04	-18.10	3.3E-35
CGH.R	0.565	0.540	-0.48	-0.57	-0.40	0.04	-16.93	6.0E-30
CST.L	0.624	0.620	-0.09	-0.17	-0.01	0.04	-3.22	0.009
CST.R	0.614	0.610	-0.10	-0.18	-0.01	0.04	-3.35	0.021
EC.L	0.484	0.465	-0.64	-0.73	-0.56	0.04	-22.43	5.3E-53
EC.R	0.483	0.465	-0.63	-0.72	-0.54	0.04	-22.01	2.7E-47
FX.ST.L	0.580	0.564	-0.41	-0.49	-0.33	0.04	-14.33	1.6E-23
FX.ST.R	0.579	0.563	-0.40	-0.48	-0.31	0.04	-13.93	8.5E-21
PCR.L	0.506	0.494	-0.38	-0.46	-0.30	0.04	-13.25	1.9E-21
PCR.R	0.512	0.500	-0.41	-0.50	-0.33	0.04	-14.43	4.9E-23
PLIC.L	0.697	0.692	-0.17	-0.26	-0.09	0.04	-6.07	7.0E-06
PLIC.R	0.704	0.699	-0.18	-0.26	-0.10	0.04	-6.23	1.4E-05
PTR.L	0.625	0.611	-0.40	-0.48	-0.32	0.04	-14.00	5.3E-20
PTR.R	0.629	0.614	-0.41	-0.50	-0.33	0.04	-14.35	2.0E-21
RLIC.L	0.616	0.603	-0.40	-0.49	-0.32	0.04	-14.08	1.4E-20
RLIC.R	0.600	0.588	-0.37	-0.46	-0.29	0.04	-13.03	1.8E-17
SCR.L	0.516	0.505	-0.42	-0.50	-0.33	0.04	-14.60	3.0E-22
SCR.R	0.511	0.501	-0.39	-0.47	-0.30	0.04	-13.45	3.1E-18
SFO.L	0.549	0.535	-0.34	-0.42	-0.26	0.04	-11.88	1.1E-15
SFO.R	0.552	0.542	-0.26	-0.34	-0.18	0.04	-9.02	1.6E-09
SLF.L	0.529	0.516	-0.47	-0.55	-0.38	0.04	-16.24	1.5E-28
SLF.R	0.527	0.513	-0.48	-0.57	-0.40	0.04	-16.84	2.0E-32
SS.L	0.578	0.560	-0.55	-0.63	-0.46	0.04	-19.04	6.4E-36
SS.R	0.579	0.560	-0.52	-0.60	-0.43	0.04	-18.13	6.3E-35
TAP.L	0.571	0.552	-0.35	-0.43	-0.26	0.04	-12.06	2.8E-15
TAP.R	0.603	0.587	-0.29	-0.37	-0.21	0.04	-10.09	1.4E-12
UNC.L	0.543	0.525	-0.33	-0.42	-0.25	0.04	-11.64	4.1E-16
UNC.R	0.563	0.541	-0.40	-0.48	-0.31	0.04	-13.80	2.1E-20

**Supplementary Table 6.** Effect sizes for FA differences between healthy controls and the ‘L TLE-HS’ syndrome.

ROI	Mean FA controls	Mean FA patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageFA	0.585	0.565	-0.92	-1.05	-0.79	0.07	-16.49	6.6E-40
BCC	0.690	0.666	-0.75	-0.88	-0.62	0.07	-13.35	1.0E-26
GCC	0.695	0.670	-0.79	-0.92	-0.66	0.07	-14.11	2.6E-28
SCC	0.762	0.751	-0.48	-0.60	-0.35	0.07	-8.48	1.7E-10
ACR.L	0.479	0.459	-0.66	-0.79	-0.53	0.07	-11.83	1.1E-21
ACR.R	0.484	0.467	-0.53	-0.66	-0.40	0.07	-9.41	3.7E-14
ALIC.L	0.600	0.583	-0.61	-0.74	-0.48	0.07	-10.92	5.6E-20
ALIC.R	0.607	0.599	-0.28	-0.41	-0.16	0.06	-5.04	9.8E-06
CGC.L	0.648	0.613	-0.89	-1.02	-0.76	0.07	-15.87	1.6E-36
CGC.R	0.604	0.578	-0.68	-0.81	-0.55	0.07	-12.06	2.6E-24
CGH.L	0.553	0.507	-1.01	-1.15	-0.88	0.07	-18.07	1.4E-50
CGH.R	0.565	0.546	-0.43	-0.56	-0.30	0.07	-7.63	6.0E-11
CST.L	0.624	0.623	-0.05	-0.17	0.08	0.06	-0.80	0.319
CST.R	0.614	0.611	-0.10	-0.22	0.03	0.06	-1.71	0.099
EC.L	0.484	0.456	-1.02	-1.15	-0.89	0.07	-18.26	4.6E-49
EC.R	0.483	0.465	-0.68	-0.81	-0.55	0.07	-12.11	4.7E-25
FX.ST.L	0.580	0.550	-0.83	-0.96	-0.70	0.07	-14.81	4.8E-33
FX.ST.R	0.579	0.561	-0.47	-0.60	-0.35	0.07	-8.39	1.1E-12
PCR.L	0.506	0.490	-0.54	-0.67	-0.41	0.07	-9.54	1.9E-14
PCR.R	0.512	0.498	-0.46	-0.59	-0.34	0.07	-8.22	1.1E-11
PLIC.L	0.697	0.690	-0.25	-0.38	-0.13	0.06	-4.49	9.9E-05
PLIC.R	0.704	0.699	-0.15	-0.27	-0.02	0.06	-2.62	0.009
PTR.L	0.625	0.608	-0.48	-0.61	-0.35	0.07	-8.61	2.4E-11
PTR.R	0.629	0.613	-0.43	-0.55	-0.30	0.07	-7.59	6.8E-09
RLIC.L	0.616	0.596	-0.61	-0.74	-0.48	0.07	-10.75	2.1E-18
RLIC.R	0.600	0.587	-0.39	-0.51	-0.26	0.06	-6.86	3.0E-09
SCR.L	0.516	0.505	-0.40	-0.52	-0.27	0.06	-7.06	4.4E-09
SCR.R	0.511	0.500	-0.40	-0.52	-0.27	0.06	-7.02	1.3E-08
SFO.L	0.549	0.531	-0.43	-0.56	-0.30	0.07	-7.61	4.1E-11
SFO.R	0.552	0.542	-0.26	-0.39	-0.14	0.06	-4.68	4.3E-05
SLF.L	0.529	0.510	-0.67	-0.80	-0.55	0.07	-12.01	2.3E-23
SLF.R	0.527	0.511	-0.58	-0.71	-0.45	0.07	-10.27	7.7E-18
SS.L	0.578	0.552	-0.78	-0.91	-0.65	0.07	-13.96	1.2E-29
SS.R	0.579	0.561	-0.52	-0.64	-0.39	0.07	-9.19	4.3E-14
TAP.L	0.571	0.550	-0.40	-0.53	-0.27	0.06	-7.13	2.1E-09
TAP.R	0.603	0.586	-0.33	-0.46	-0.21	0.06	-5.94	2.0E-06
UNC.L	0.543	0.512	-0.61	-0.74	-0.48	0.07	-10.95	1.9E-19
UNC.R	0.563	0.547	-0.32	-0.45	-0.20	0.06	-5.74	8.3E-07

**Supplementary Table 7.** Effect sizes for FA differences between healthy controls and the ‘R TLE-HS’ syndrome.

ROI	Mean FA controls	Mean FA patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageFA	0.585	0.562	-1.06	-1.20	-0.92	0.07	-17.33	5.4E-46
BCC	0.690	0.659	-0.87	-1.01	-0.73	0.07	-14.22	2.9E-34
GCC	0.695	0.664	-0.85	-0.98	-0.71	0.07	-13.84	2.4E-33
SCC	0.762	0.750	-0.41	-0.54	-0.27	0.07	-6.70	6.6E-10
ACR.L	0.479	0.456	-0.68	-0.81	-0.54	0.07	-11.06	3.4E-22
ACR.R	0.484	0.458	-0.78	-0.91	-0.64	0.07	-12.71	2.0E-27
ALIC.L	0.600	0.587	-0.45	-0.59	-0.32	0.07	-7.40	1.1E-09
ALIC.R	0.607	0.591	-0.55	-0.69	-0.42	0.07	-9.03	2.8E-15
CGC.L	0.648	0.620	-0.68	-0.81	-0.54	0.07	-11.06	3.2E-21
CGC.R	0.604	0.574	-0.75	-0.89	-0.61	0.07	-12.23	1.2E-25
CGH.L	0.553	0.534	-0.46	-0.60	-0.33	0.07	-7.55	9.6E-11
CGH.R	0.565	0.515	-1.02	-1.16	-0.88	0.07	-16.69	8.4E-46
CST.L	0.624	0.613	-0.29	-0.43	-0.16	0.07	-4.76	9.0E-05
CST.R	0.614	0.606	-0.19	-0.33	-0.06	0.07	-3.12	0.002
EC.L	0.484	0.463	-0.73	-0.87	-0.60	0.07	-11.99	1.8E-25
EC.R	0.483	0.455	-0.99	-1.13	-0.85	0.07	-16.16	2.3E-42
FX.ST.L	0.580	0.564	-0.41	-0.54	-0.27	0.07	-6.65	4.0E-09
FX.ST.R	0.579	0.554	-0.61	-0.74	-0.47	0.07	-9.95	1.7E-18
PCR.L	0.506	0.493	-0.37	-0.51	-0.24	0.07	-6.13	2.2E-08
PCR.R	0.512	0.494	-0.55	-0.69	-0.42	0.07	-9.08	1.3E-15
PLIC.L	0.697	0.693	-0.14	-0.27	0.00	0.07	-2.27	0.066
PLIC.R	0.704	0.696	-0.24	-0.38	-0.11	0.07	-4.00	2.1E-04
PTR.L	0.625	0.608	-0.41	-0.55	-0.28	0.07	-6.76	6.5E-10
PTR.R	0.629	0.605	-0.62	-0.76	-0.48	0.07	-10.17	1.2E-18
RLIC.L	0.616	0.604	-0.31	-0.45	-0.18	0.07	-5.15	1.9E-06
RLIC.R	0.600	0.584	-0.47	-0.60	-0.33	0.07	-7.66	2.9E-11
SCR.L	0.516	0.501	-0.53	-0.67	-0.40	0.07	-8.71	3.2E-13
SCR.R	0.511	0.497	-0.46	-0.60	-0.33	0.07	-7.60	4.8E-12
SFO.L	0.549	0.533	-0.37	-0.50	-0.23	0.07	-6.00	6.3E-08
SFO.R	0.552	0.534	-0.47	-0.60	-0.33	0.07	-7.64	5.0E-11
SLF.L	0.529	0.516	-0.43	-0.56	-0.29	0.07	-7.03	2.6E-09
SLF.R	0.527	0.509	-0.59	-0.72	-0.45	0.07	-9.60	2.3E-17
SS.L	0.578	0.557	-0.55	-0.69	-0.41	0.07	-8.99	1.4E-16
SS.R	0.579	0.549	-0.83	-0.97	-0.69	0.07	-13.57	2.0E-31
TAP.L	0.571	0.535	-0.68	-0.82	-0.54	0.07	-11.10	6.7E-22
TAP.R	0.603	0.570	-0.59	-0.73	-0.46	0.07	-9.70	9.1E-18
UNC.L	0.543	0.528	-0.28	-0.42	-0.15	0.07	-4.63	3.2E-05
UNC.R	0.563	0.515	-0.90	-1.04	-0.76	0.07	-14.69	9.3E-37

**Supplementary Table 8.** Effect sizes for FA differences between healthy controls and the ‘L TLE-NL’ syndrome.

ROI	Mean FA controls	Mean FA patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageFA	0.585	0.575	-0.48	-0.64	-0.31	0.09	-6.02	1.8E-07
BCC	0.690	0.675	-0.46	-0.63	-0.29	0.09	-5.77	1.1E-07
GCC	0.695	0.683	-0.39	-0.56	-0.23	0.09	-4.96	9.8E-06
SCC	0.762	0.757	-0.21	-0.38	-0.04	0.09	-2.66	0.029
ACR.L	0.479	0.470	-0.32	-0.48	-0.15	0.09	-3.98	2.0E-04
ACR.R	0.484	0.473	-0.37	-0.54	-0.20	0.09	-4.64	6.1E-05
ALIC.L	0.600	0.590	-0.35	-0.52	-0.19	0.09	-4.46	4.4E-05
ALIC.R	0.607	0.601	-0.21	-0.38	-0.04	0.09	-2.65	0.016
CGC.L	0.648	0.638	-0.25	-0.41	-0.08	0.09	-3.12	0.004
CGC.R	0.604	0.595	-0.23	-0.40	-0.06	0.09	-2.92	0.008
CGH.L	0.553	0.536	-0.36	-0.53	-0.19	0.09	-4.55	1.5E-05
CGH.R	0.565	0.555	-0.23	-0.40	-0.06	0.09	-2.91	0.012
CST.L	0.624	0.621	-0.07	-0.24	0.10	0.09	-0.87	0.378
CST.R	0.614	0.614	0.00	-0.17	0.17	0.09	0.00	0.910
EC.L	0.484	0.471	-0.47	-0.63	-0.30	0.09	-5.88	1.1E-07
EC.R	0.483	0.472	-0.41	-0.58	-0.24	0.09	-5.14	1.5E-06
FX.ST.L	0.580	0.571	-0.27	-0.44	-0.10	0.09	-3.43	0.002
FX.ST.R	0.579	0.573	-0.15	-0.32	0.01	0.09	-1.94	0.050
PCR.L	0.506	0.497	-0.32	-0.49	-0.16	0.09	-4.07	4.3E-04
PCR.R	0.512	0.503	-0.32	-0.48	-0.15	0.09	-4.00	1.3E-04
PLIC.L	0.697	0.693	-0.14	-0.31	0.02	0.09	-1.81	0.119
PLIC.R	0.704	0.700	-0.15	-0.31	0.02	0.09	-1.84	0.079
PTR.L	0.625	0.611	-0.42	-0.58	-0.25	0.09	-5.24	3.9E-06
PTR.R	0.629	0.618	-0.32	-0.48	-0.15	0.09	-3.98	2.9E-04
RLIC.L	0.616	0.607	-0.26	-0.42	-0.09	0.09	-3.23	0.002
RLIC.R	0.600	0.590	-0.29	-0.45	-0.12	0.09	-3.63	6.1E-04
SCR.L	0.516	0.508	-0.27	-0.44	-0.11	0.09	-3.45	8.1E-04
SCR.R	0.511	0.503	-0.32	-0.48	-0.15	0.09	-3.99	7.9E-04
SFO.L	0.549	0.542	-0.18	-0.34	-0.01	0.09	-2.22	0.045
SFO.R	0.552	0.546	-0.16	-0.33	0.01	0.09	-2.00	0.077
SLF.L	0.529	0.521	-0.30	-0.46	-0.13	0.09	-3.72	4.6E-04
SLF.R	0.527	0.518	-0.32	-0.49	-0.16	0.09	-4.07	1.5E-04
SS.L	0.578	0.563	-0.46	-0.63	-0.30	0.09	-5.84	1.0E-07
SS.R	0.579	0.565	-0.42	-0.59	-0.26	0.09	-5.35	1.1E-06
TAP.L	0.571	0.563	-0.15	-0.32	0.02	0.09	-1.91	0.091
TAP.R	0.603	0.599	-0.07	-0.24	0.09	0.09	-0.93	0.308
UNC.L	0.543	0.533	-0.19	-0.35	-0.02	0.09	-2.37	0.019
UNC.R	0.563	0.561	-0.04	-0.20	0.13	0.09	-0.48	0.698

**Supplementary Table 9.** Effect sizes for FA differences between healthy controls and the ‘R TLE-NL’ syndrome.

ROI	Mean FA controls	Mean FA patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageFA	0.585	0.573	-0.58	-0.78	-0.39	0.10	-6.14	4.8E-08
BCC	0.690	0.678	-0.37	-0.57	-0.18	0.10	-3.93	1.1E-04
GCC	0.695	0.683	-0.40	-0.60	-0.21	0.10	-4.26	9.9E-05
SCC	0.762	0.755	-0.31	-0.50	-0.11	0.10	-3.22	0.005
ACR.L	0.479	0.471	-0.28	-0.47	-0.08	0.10	-2.94	0.006
ACR.R	0.484	0.473	-0.37	-0.56	-0.17	0.10	-3.88	4.0E-04
ALIC.L	0.600	0.591	-0.29	-0.49	-0.09	0.10	-3.06	0.002
ALIC.R	0.607	0.600	-0.22	-0.41	-0.02	0.10	-2.28	0.024
CGC.L	0.648	0.630	-0.42	-0.62	-0.23	0.10	-4.46	2.4E-05
CGC.R	0.604	0.584	-0.51	-0.71	-0.32	0.10	-5.39	5.9E-07
CGH.L	0.553	0.537	-0.33	-0.52	-0.13	0.10	-3.45	7.1E-04
CGH.R	0.565	0.538	-0.55	-0.74	-0.35	0.10	-5.75	5.2E-08
CST.L	0.624	0.623	0.00	-0.20	0.20	0.10	0.00	0.921
CST.R	0.614	0.612	-0.02	-0.22	0.17	0.10	-0.26	0.722
EC.L	0.484	0.471	-0.47	-0.67	-0.28	0.10	-4.98	2.1E-06
EC.R	0.483	0.465	-0.64	-0.84	-0.44	0.10	-6.73	2.6E-10
FX.ST.L	0.580	0.575	-0.14	-0.33	0.06	0.10	-1.45	0.175
FX.ST.R	0.579	0.566	-0.34	-0.53	-0.14	0.10	-3.53	9.3E-04
PCR.L	0.506	0.497	-0.32	-0.52	-0.13	0.10	-3.39	0.003
PCR.R	0.512	0.505	-0.25	-0.45	-0.05	0.10	-2.63	0.012
PLIC.L	0.697	0.693	-0.15	-0.34	0.05	0.10	-1.53	0.122
PLIC.R	0.704	0.699	-0.18	-0.38	0.01	0.10	-1.95	0.065
PTR.L	0.625	0.616	-0.27	-0.47	-0.08	0.10	-2.89	0.006
PTR.R	0.629	0.618	-0.35	-0.54	-0.15	0.10	-3.64	5.5E-04
RLIC.L	0.616	0.608	-0.29	-0.49	-0.10	0.10	-3.08	0.006
RLIC.R	0.600	0.590	-0.32	-0.52	-0.13	0.10	-3.39	9.5E-04
SCR.L	0.516	0.508	-0.31	-0.51	-0.12	0.10	-3.29	0.002
SCR.R	0.511	0.503	-0.36	-0.55	-0.16	0.10	-3.77	0.001
SFO.L	0.549	0.543	-0.13	-0.32	0.07	0.10	-1.33	0.169
SFO.R	0.552	0.550	-0.05	-0.25	0.14	0.10	-0.56	0.702
SLF.L	0.529	0.520	-0.34	-0.53	-0.14	0.10	-3.54	4.5E-04
SLF.R	0.527	0.514	-0.46	-0.66	-0.27	0.10	-4.87	3.4E-06
SS.L	0.578	0.564	-0.44	-0.63	-0.24	0.10	-4.59	2.2E-05
SS.R	0.579	0.560	-0.60	-0.80	-0.41	0.10	-6.35	9.7E-09
TAP.L	0.571	0.567	-0.10	-0.29	0.10	0.10	-1.02	0.398
TAP.R	0.603	0.593	-0.21	-0.40	-0.01	0.10	-2.17	0.035
UNC.L	0.543	0.534	-0.17	-0.37	0.02	0.10	-1.83	0.071
UNC.R	0.563	0.536	-0.50	-0.70	-0.30	0.10	-5.28	8.5E-07

**Supplementary Table 10.** Effect sizes for FA differences between healthy controls and the ‘GGE’ syndrome.

ROI	Mean FA controls	Mean FA patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageFA	0.585	0.575	-0.49	-0.65	-0.33	0.08	-6.59	4.5E-10
BCC	0.690	0.677	-0.44	-0.60	-0.28	0.08	-5.91	1.8E-08
GCC	0.695	0.681	-0.57	-0.73	-0.41	0.08	-7.59	1.1E-11
SCC	0.762	0.753	-0.39	-0.55	-0.23	0.08	-5.27	1.1E-06
ACR.L	0.479	0.471	-0.35	-0.51	-0.19	0.08	-4.73	3.9E-06
ACR.R	0.484	0.474	-0.40	-0.56	-0.24	0.08	-5.36	6.3E-07
ALIC.L	0.600	0.589	-0.44	-0.60	-0.28	0.08	-5.86	5.7E-07
ALIC.R	0.607	0.601	-0.21	-0.37	-0.06	0.08	-2.87	.0059
CGC.L	0.648	0.631	-0.46	-0.62	-0.30	0.08	-6.20	4.6E-08
CGC.R	0.604	0.589	-0.42	-0.58	-0.26	0.08	-5.64	3.8E-07
CGH.L	0.553	0.532	-0.41	-0.57	-0.25	0.08	-5.55	2.5E-07
CGH.R	0.565	0.549	-0.30	-0.46	-0.14	0.08	-4.06	2.1E-04
CST.L	0.624	0.622	-0.02	-0.18	0.14	0.08	-0.30	0.729
CST.R	0.614	0.614	0.00	-0.16	0.16	0.08	0.00	0.935
EC.L	0.484	0.470	-0.55	-0.71	-0.39	0.08	-7.43	3.7E-12
EC.R	0.483	0.473	-0.42	-0.58	-0.26	0.08	-5.62	7.7E-07
FX.ST.L	0.580	0.568	-0.36	-0.52	-0.20	0.08	-4.88	7.3E-06
FX.ST.R	0.579	0.567	-0.37	-0.53	-0.21	0.08	-4.96	7.5E-06
PCR.L	0.506	0.493	-0.50	-0.66	-0.34	0.08	-6.76	4.1E-10
PCR.R	0.512	0.502	-0.39	-0.55	-0.23	0.08	-5.29	3.8E-07
PLIC.L	0.697	0.691	-0.22	-0.38	-0.06	0.08	-2.92	0.003
PLIC.R	0.704	0.702	-0.07	-0.23	0.08	0.08	-0.99	0.195
PTR.L	0.625	0.616	-0.33	-0.49	-0.18	0.08	-4.49	1.7E-05
PTR.R	0.629	0.621	-0.34	-0.50	-0.18	0.08	-4.61	8.0E-05
RLIC.L	0.616	0.601	-0.51	-0.67	-0.35	0.08	-6.88	2.3E-10
RLIC.R	0.600	0.590	-0.36	-0.51	-0.20	0.08	-4.77	5.8E-06
SCR.L	0.516	0.506	-0.44	-0.60	-0.28	0.08	-5.90	1.4E-08
SCR.R	0.511	0.505	-0.28	-0.44	-0.12	0.08	-3.73	3.2E-04
SFO.L	0.549	0.537	-0.35	-0.51	-0.20	0.08	-4.76	1.8E-05
SFO.R	0.552	0.549	-0.08	-0.24	0.08	0.08	-1.07	0.332
SLF.L	0.529	0.516	-0.57	-0.73	-0.41	0.08	-7.60	5.0E-12
SLF.R	0.527	0.514	-0.51	-0.67	-0.35	0.08	-6.83	4.8E-11
SS.L	0.578	0.566	-0.41	-0.57	-0.25	0.08	-5.51	9.9E-07
SS.R	0.579	0.569	-0.37	-0.53	-0.21	0.08	-4.93	2.1E-05
TAP.L	0.571	0.562	-0.15	-0.31	0.00	0.08	-2.06	0.057
TAP.R	0.603	0.595	-0.19	-0.34	-0.03	0.08	-2.51	0.033
UNC.L	0.543	0.532	-0.21	-0.37	-0.05	0.08	-2.86	0.008
UNC.R	0.563	0.555	-0.15	-0.31	0.01	0.08	-2.05	0.067

**Supplementary Table 11.** Effect sizes for FA differences between healthy controls and the ‘ExE’ syndrome.

ROI	Mean FA controls	Mean FA patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageFA	0.585	0.570	-0.75	-0.91	-0.60	0.08	-10.41	1.1E-19
BCC	0.690	0.667	-0.73	-0.89	-0.57	0.08	-10.07	9.4E-20
GCC	0.695	0.677	-0.64	-0.80	-0.49	0.08	-8.89	9.5E-16
SCC	0.762	0.752	-0.42	-0.57	-0.26	0.08	-5.75	4.2E-07
ACR.L	0.479	0.464	-0.55	-0.71	-0.40	0.08	-7.64	9.8E-13
ACR.R	0.484	0.467	-0.63	-0.78	-0.47	0.08	-8.66	2.8E-14
ALIC.L	0.600	0.584	-0.57	-0.73	-0.42	0.08	-7.89	8.6E-12
ALIC.R	0.607	0.593	-0.49	-0.65	-0.34	0.08	-6.81	2.1E-09
CGC.L	0.648	0.628	-0.49	-0.65	-0.34	0.08	-6.82	8.2E-10
CGC.R	0.604	0.585	-0.48	-0.64	-0.32	0.08	-6.62	4.1E-09
CGH.L	0.553	0.532	-0.41	-0.56	-0.25	0.08	-5.60	3.7E-07
CGH.R	0.565	0.546	-0.36	-0.52	-0.21	0.08	-4.99	6.6E-06
CST.L	0.624	0.619	-0.11	-0.27	0.04	0.08	-1.58	0.140
CST.R	0.614	0.608	-0.15	-0.30	0.01	0.08	-2.05	0.072
EC.L	0.484	0.468	-0.60	-0.76	-0.44	0.08	-8.30	5.4E-14
EC.R	0.483	0.467	-0.58	-0.74	-0.43	0.08	-8.04	2.0E-13
FX.ST.L	0.580	0.568	-0.32	-0.48	-0.17	0.08	-4.46	3.1E-05
FX.ST.R	0.579	0.567	-0.33	-0.49	-0.18	0.08	-4.58	4.4E-05
PCR.L	0.506	0.497	-0.35	-0.50	-0.19	0.08	-4.78	1.5E-05
PCR.R	0.512	0.502	-0.39	-0.54	-0.23	0.08	-5.34	2.6E-07
PLIC.L	0.697	0.692	-0.21	-0.37	-0.06	0.08	-2.96	0.009
PLIC.R	0.704	0.699	-0.18	-0.33	-0.03	0.08	-2.48	0.009
PTR.L	0.625	0.613	-0.41	-0.56	-0.25	0.08	-5.64	3.8E-07
PTR.R	0.629	0.617	-0.42	-0.58	-0.27	0.08	-5.84	4.1E-07
RLIC.L	0.616	0.608	-0.28	-0.44	-0.13	0.08	-3.92	1.6E-04
RLIC.R	0.600	0.593	-0.26	-0.41	-0.10	0.08	-3.53	7.3E-04
SCR.L	0.516	0.506	-0.47	-0.63	-0.31	0.08	-6.48	4.2E-09
SCR.R	0.511	0.502	-0.39	-0.55	-0.24	0.08	-5.44	2.6E-07
SFO.L	0.549	0.532	-0.42	-0.58	-0.26	0.08	-5.79	4.5E-08
SFO.R	0.552	0.538	-0.36	-0.51	-0.20	0.08	-4.91	9.6E-06
SLF.L	0.529	0.518	-0.43	-0.59	-0.28	0.08	-5.95	6.5E-08
SLF.R	0.527	0.514	-0.49	-0.65	-0.33	0.08	-6.76	4.1E-10
SS.L	0.578	0.565	-0.43	-0.58	-0.27	0.08	-5.90	1.4E-07
SS.R	0.579	0.563	-0.51	-0.66	-0.35	0.08	-7.02	5.8E-10
TAP.L	0.571	0.554	-0.32	-0.48	-0.17	0.08	-4.47	9.8E-05
TAP.R	0.603	0.590	-0.24	-0.40	-0.09	0.08	-3.33	0.002
UNC.L	0.543	0.523	-0.38	-0.54	-0.23	0.08	-5.26	1.6E-06
UNC.R	0.563	0.543	-0.37	-0.52	-0.21	0.08	-5.05	3.6E-06

**Supplementary Table 12.** Effect sizes for MD differences between healthy controls and the ‘All Epilepsies’ syndrome.

ROI	Mean MD controls	Mean MD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageMD	0.000801	0.000819	0.37	0.28	0.46	0.05	11.92	3.3E-16
BCC	0.000881	0.000903	0.23	0.14	0.32	0.05	7.44	3.2E-07
GCC	0.000816	0.000834	0.14	0.05	0.23	0.04	4.57	0.002
SCC	0.000791	0.000795	0.06	-0.03	0.14	0.04	1.81	0.210
ACR.L	0.000745	0.000763	0.32	0.23	0.41	0.05	10.20	2.5E-12
ACR.R	0.000739	0.000757	0.34	0.26	0.43	0.05	11.11	2.7E-14
ALIC.L	0.000695	0.000702	0.14	0.05	0.23	0.04	4.41	0.002
ALIC.R	0.000695	0.000702	0.15	0.06	0.24	0.05	4.87	8.1E-04
CGC.L	0.000738	0.000748	0.17	0.09	0.26	0.05	5.62	1.1E-04
CGC.R	0.000729	0.000740	0.18	0.09	0.27	0.05	5.90	4.6E-05
CGH.L	0.000876	0.000896	0.17	0.08	0.26	0.05	5.47	1.7E-04
CGH.R	0.000859	0.000877	0.15	0.07	0.24	0.05	4.96	6.4E-04
CST.L	0.000740	0.000741	0.02	-0.07	0.11	0.04	0.62	0.670
CST.R	0.000743	0.000743	0.01	-0.08	0.10	0.04	0.40	0.780
EC.L	0.000741	0.000755	0.34	0.25	0.43	0.05	11.05	4.2E-14
EC.R	0.000737	0.000752	0.38	0.29	0.47	0.05	12.15	1.1E-16
FX.ST.L	0.000787	0.000797	0.14	0.05	0.22	0.04	4.39	0.002
FX.ST.R	0.000781	0.000794	0.19	0.10	0.28	0.05	6.03	3.3E-05
PCR.L	0.000789	0.000805	0.28	0.20	0.37	0.05	9.17	2.9E-10
PCR.R	0.000802	0.000819	0.27	0.18	0.36	0.05	8.69	2.6E-09
PLIC.L	0.000683	0.000686	0.12	0.03	0.20	0.04	3.73	0.010
PLIC.R	0.000677	0.000683	0.15	0.06	0.24	0.05	4.91	7.2E-04
PTR.L	0.000820	0.000833	0.17	0.08	0.26	0.05	5.41	2.1E-04
PTR.R	0.000811	0.000825	0.17	0.08	0.26	0.05	5.43	1.8E-04
RLIC.L	0.000778	0.000786	0.16	0.07	0.25	0.05	5.25	3.0E-04
RLIC.R	0.000776	0.000784	0.13	0.04	0.22	0.04	4.20	0.004
SCR.L	0.000697	0.000708	0.27	0.18	0.36	0.05	8.82	1.5E-09
SCR.R	0.000696	0.000706	0.23	0.14	0.32	0.05	7.37	3.7E-07
SFO.L	0.000679	0.000690	0.11	0.02	0.20	0.04	3.60	0.013
SFO.R	0.000669	0.000684	0.18	0.09	0.27	0.05	5.77	7.3E-05
SLF.L	0.000709	0.000719	0.29	0.20	0.38	0.05	9.46	9.8E-11
SLF.R	0.000705	0.000717	0.36	0.27	0.45	0.05	11.66	1.7E-15
SS.L	0.000787	0.000806	0.31	0.22	0.40	0.05	10.12	4.4E-12
SS.R	0.000773	0.000791	0.32	0.23	0.41	0.05	10.30	1.5E-12
TAP.L	0.000936	0.000960	0.14	0.05	0.23	0.04	4.54	0.002
TAP.R	0.000922	0.000943	0.13	0.04	0.22	0.04	4.27	0.003
UNC.L	0.000761	0.000781	0.22	0.13	0.31	0.05	7.16	8.0E-07
UNC.R	0.000740	0.000765	0.29	0.20	0.38	0.05	9.36	1.3E-10

**Supplementary Table 13.** Effect sizes for MD differences between healthy controls and the ‘L TLE-HS’ syndrome.

ROI	Mean MD controls	Mean MD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageMD	0.000801	0.000828	0.55	0.41	0.69	0.07	9.15	3.4E-15
BCC	0.000881	0.000918	0.37	0.23	0.50	0.07	6.09	1.2E-07
GCC	0.000816	0.000856	0.28	0.15	0.42	0.07	4.73	4.0E-05
SCC	0.000791	0.000799	0.11	-0.03	0.24	0.07	1.77	0.123
ACR.L	0.000745	0.000773	0.49	0.36	0.63	0.07	8.21	1.3E-12
ACR.R	0.000739	0.000760	0.39	0.26	0.53	0.07	6.54	1.4E-08
ALIC.L	0.000695	0.000712	0.33	0.20	0.47	0.07	5.56	1.4E-06
ALIC.R	0.000695	0.000703	0.21	0.08	0.35	0.07	3.57	0.002
CGC.L	0.000738	0.000761	0.39	0.25	0.53	0.07	6.49	2.0E-08
CGC.R	0.000729	0.000746	0.27	0.14	0.41	0.07	4.51	8.7E-05
CGH.L	0.000876	0.000928	0.48	0.34	0.61	0.07	7.95	6.1E-12
CGH.R	0.000859	0.000876	0.20	0.07	0.33	0.07	3.32	0.004
CST.L	0.000740	0.000737	0.01	-0.13	0.14	0.07	0.09	0.936
CST.R	0.000743	0.000743	0.05	-0.08	0.19	0.07	0.86	0.454
EC.L	0.000741	0.000769	0.69	0.55	0.83	0.07	11.45	1.3E-22
EC.R	0.000737	0.000755	0.48	0.34	0.61	0.07	7.94	6.3E-12
FX.ST.L	0.000787	0.000817	0.42	0.28	0.55	0.07	6.96	1.8E-09
FX.ST.R	0.000781	0.000796	0.25	0.11	0.38	0.07	4.11	3.5E-04
PCR.L	0.000789	0.000814	0.44	0.30	0.57	0.07	7.30	2.7E-10
PCR.R	0.000802	0.000819	0.27	0.14	0.41	0.07	4.54	8.2E-05
PLIC.L	0.000683	0.000690	0.27	0.13	0.40	0.07	4.43	1.2E-04
PLIC.R	0.000677	0.000684	0.26	0.13	0.40	0.07	4.35	1.5E-04
PTR.L	0.000820	0.000843	0.26	0.13	0.39	0.07	4.32	1.7E-04
PTR.R	0.000811	0.000829	0.20	0.06	0.33	0.07	3.27	0.004
RLIC.L	0.000778	0.000797	0.37	0.24	0.51	0.07	6.20	7.1E-08
RLIC.R	0.000776	0.000788	0.21	0.07	0.34	0.07	3.48	0.002
SCR.L	0.000697	0.000714	0.42	0.28	0.55	0.07	6.96	1.5E-09
SCR.R	0.000696	0.000708	0.27	0.14	0.41	0.07	4.55	7.4E-05
SFO.L	0.000679	0.000701	0.22	0.08	0.35	0.07	3.61	0.002
SFO.R	0.000669	0.000689	0.24	0.11	0.38	0.07	4.04	4.5E-04
SLF.L	0.000709	0.000724	0.44	0.30	0.57	0.07	7.27	3.3E-10
SLF.R	0.000705	0.000719	0.40	0.26	0.53	0.07	6.61	1.1E-08
SS.L	0.000787	0.000827	0.66	0.52	0.80	0.07	10.97	5.1E-21
SS.R	0.000773	0.000789	0.31	0.17	0.44	0.07	5.09	1.0E-05
TAP.L	0.000936	0.000976	0.21	0.07	0.34	0.07	3.42	0.003
TAP.R	0.000922	0.000943	0.11	-0.03	0.24	0.07	1.79	0.119
UNC.L	0.000761	0.000801	0.47	0.34	0.61	0.07	7.86	1.1E-11
UNC.R	0.000740	0.000763	0.30	0.17	0.44	0.07	5.01	1.3E-05

**Supplementary Table 14.** Effect sizes for MD differences between healthy controls and the ‘R TLE-HS’ syndrome.

ROI	Mean MD controls	Mean MD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageMD	0.000801	0.000831	0.60	0.45	0.75	0.08	8.93	3.8E-15
BCC	0.000881	0.000927	0.46	0.31	0.61	0.08	6.79	1.9E-09
GCC	0.000816	0.000866	0.32	0.17	0.47	0.08	4.73	2.7E-05
SCC	0.000791	0.000808	0.20	0.06	0.35	0.07	3.00	0.007
ACR.L	0.000745	0.000771	0.44	0.29	0.59	0.08	6.56	6.7E-09
ACR.R	0.000739	0.000771	0.59	0.44	0.74	0.08	8.74	1.5E-14
ALIC.L	0.000695	0.000701	0.17	0.02	0.32	0.07	2.53	0.024
ALIC.R	0.000695	0.000707	0.30	0.15	0.45	0.08	4.47	7.5E-05
CGC.L	0.000738	0.000747	0.18	0.03	0.33	0.07	2.70	0.017
CGC.R	0.000729	0.000751	0.34	0.19	0.49	0.08	5.08	6.6E-06
CGH.L	0.000876	0.000880	0.13	-0.02	0.28	0.07	1.92	0.087
CGH.R	0.000859	0.000895	0.37	0.22	0.51	0.08	5.44	1.4E-06
CST.L	0.000740	0.000739	0.03	-0.12	0.17	0.07	0.38	0.737
CST.R	0.000743	0.000738	0.01	-0.14	0.15	0.07	0.09	0.937
EC.L	0.000741	0.000756	0.41	0.26	0.55	0.08	6.02	9.0E-08
EC.R	0.000737	0.000761	0.62	0.47	0.77	0.08	9.20	6.3E-16
FX.ST.L	0.000787	0.000785	0.02	-0.12	0.17	0.07	0.36	0.748
FX.ST.R	0.000781	0.000810	0.43	0.28	0.58	0.08	6.36	1.8E-08
PCR.L	0.000789	0.000805	0.30	0.15	0.44	0.08	4.39	9.1E-05
PCR.R	0.000802	0.000830	0.44	0.29	0.58	0.08	6.48	1.0E-08
PLIC.L	0.000683	0.000686	0.19	0.04	0.33	0.07	2.76	0.014
PLIC.R	0.000677	0.000684	0.27	0.13	0.42	0.08	4.08	3.0E-04
PTR.L	0.000820	0.000831	0.12	-0.02	0.27	0.07	1.81	0.107
PTR.R	0.000811	0.000834	0.24	0.09	0.39	0.08	3.55	0.002
RLIC.L	0.000778	0.000780	0.08	-0.07	0.22	0.07	1.16	0.302
RLIC.R	0.000776	0.000789	0.22	0.07	0.37	0.07	3.25	0.004
SCR.L	0.000697	0.000709	0.32	0.17	0.46	0.08	4.71	3.1E-05
SCR.R	0.000696	0.000711	0.34	0.20	0.49	0.08	5.11	6.1E-06
SFO.L	0.000679	0.000694	0.16	0.01	0.31	0.07	2.35	0.036
SFO.R	0.000669	0.000688	0.23	0.08	0.37	0.07	3.36	0.003
SLF.L	0.000709	0.000718	0.29	0.14	0.44	0.08	4.29	1.5E-04
SLF.R	0.000705	0.000721	0.46	0.31	0.60	0.08	6.79	1.9E-09
SS.L	0.000787	0.000802	0.27	0.12	0.42	0.08	4.03	3.5E-04
SS.R	0.000773	0.000811	0.67	0.52	0.82	0.08	9.93	3.1E-18
TAP.L	0.000936	0.000984	0.25	0.11	0.40	0.08	3.78	7.9E-04
TAP.R	0.000922	0.000977	0.30	0.15	0.44	0.08	4.42	8.7E-05
UNC.L	0.000761	0.000767	0.10	-0.04	0.25	0.07	1.54	0.170
UNC.R	0.000740	0.000788	0.62	0.47	0.76	0.08	9.14	8.8E-16

**Supplementary Table 15.** Effect sizes for MD differences between healthy controls and the ‘L TLE-NL’ syndrome.

ROI	Mean MD controls	Mean MD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageMD	0.000801	0.000810	0.20	0.04	0.37	0.08	2.60	0.020
BCC	0.000881	0.000879	0.00	-0.17	0.16	0.08	-0.04	1.000
GCC	0.000816	0.000795	-0.14	-0.31	0.02	0.08	-1.83	0.101
SCC	0.000791	0.000777	-0.15	-0.31	0.02	0.08	-1.90	0.088
ACR.L	0.000745	0.000750	0.10	-0.06	0.27	0.08	1.35	0.227
ACR.R	0.000739	0.000747	0.17	0.01	0.34	0.08	2.24	0.044
ALIC.L	0.000695	0.000697	0.05	-0.11	0.22	0.08	0.70	0.530
ALIC.R	0.000695	0.000698	0.08	-0.09	0.25	0.08	1.04	0.351
CGC.L	0.000738	0.000741	0.06	-0.10	0.23	0.08	0.82	0.463
CGC.R	0.000729	0.000731	0.05	-0.12	0.21	0.08	0.62	0.578
CGH.L	0.000876	0.000874	0.00	-0.17	0.16	0.08	-0.06	0.958
CGH.R	0.000859	0.000856	-0.02	-0.19	0.15	0.08	-0.26	0.816
CST.L	0.000740	0.000752	0.11	-0.06	0.27	0.08	1.37	0.220
CST.R	0.000743	0.000752	0.09	-0.07	0.26	0.08	1.19	0.287
EC.L	0.000741	0.000750	0.24	0.08	0.41	0.08	3.13	0.005
EC.R	0.000737	0.000747	0.26	0.10	0.43	0.08	3.38	0.002
FX.ST.L	0.000787	0.000787	0.02	-0.14	0.19	0.08	0.31	0.780
FX.ST.R	0.000781	0.000776	-0.05	-0.21	0.12	0.08	-0.61	0.586
PCR.L	0.000789	0.000798	0.18	0.01	0.34	0.08	2.25	0.044
PCR.R	0.000802	0.000813	0.20	0.04	0.37	0.08	2.61	0.020
PLIC.L	0.000683	0.000686	0.10	-0.07	0.27	0.08	1.29	0.246
PLIC.R	0.000677	0.000683	0.18	0.01	0.34	0.08	2.26	0.043
PTR.L	0.000820	0.000832	0.16	-0.01	0.33	0.08	2.06	0.065
PTR.R	0.000811	0.000820	0.11	-0.05	0.28	0.08	1.45	0.192
RLIC.L	0.000778	0.000785	0.14	-0.03	0.30	0.08	1.75	0.117
RLIC.R	0.000776	0.000780	0.08	-0.08	0.25	0.08	1.04	0.349
SCR.L	0.000697	0.000705	0.22	0.05	0.38	0.08	2.77	0.013
SCR.R	0.000696	0.000704	0.21	0.04	0.37	0.08	2.63	0.018
SFO.L	0.000679	0.000676	-0.01	-0.17	0.16	0.08	-0.09	0.938
SFO.R	0.000669	0.000678	0.11	-0.05	0.28	0.08	1.47	0.188
SLF.L	0.000709	0.000717	0.25	0.08	0.42	0.08	3.21	0.004
SLF.R	0.000705	0.000716	0.35	0.18	0.51	0.09	4.46	7.1E-05
SS.L	0.000787	0.000799	0.22	0.05	0.39	0.08	2.83	0.011
SS.R	0.000773	0.000785	0.24	0.08	0.41	0.08	3.10	0.005
TAP.L	0.000936	0.000938	0.02	-0.15	0.19	0.08	0.25	0.823
TAP.R	0.000922	0.000927	0.04	-0.13	0.20	0.08	0.48	0.666
UNC.L	0.000761	0.000779	0.21	0.04	0.37	0.08	2.67	0.017
UNC.R	0.000740	0.000752	0.14	-0.03	0.31	0.08	1.80	0.107

**Supplementary Table 16.** Effect sizes for MD differences between healthy controls and the ‘R TLE-NL’ syndrome.

ROI	Mean MD controls	Mean MD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageMD	0.000801	0.000810	0.21	0.01	0.42	0.10	2.19	0.039
BCC	0.000881	0.000890	0.13	-0.07	0.33	0.10	1.32	0.212
GCC	0.000816	0.000817	0.05	-0.15	0.26	0.10	0.55	0.604
SCC	0.000791	0.000783	-0.09	-0.29	0.12	0.10	-0.89	0.398
ACR.L	0.000745	0.000751	0.12	-0.08	0.33	0.10	1.27	0.228
ACR.R	0.000739	0.000749	0.21	0.01	0.41	0.10	2.14	0.042
ALIC.L	0.000695	0.000700	0.07	-0.13	0.28	0.10	0.76	0.472
ALIC.R	0.000695	0.000707	0.21	0.01	0.41	0.10	2.13	0.044
CGC.L	0.000738	0.000741	0.06	-0.14	0.27	0.10	0.66	0.533
CGC.R	0.000729	0.000733	0.08	-0.13	0.28	0.10	0.77	0.464
CGH.L	0.000876	0.000878	-0.01	-0.22	0.19	0.10	-0.14	0.896
CGH.R	0.000859	0.000888	0.22	0.01	0.42	0.10	2.22	0.036
CST.L	0.000740	0.000747	0.05	-0.16	0.25	0.10	0.46	0.663
CST.R	0.000743	0.000747	0.02	-0.18	0.23	0.10	0.24	0.819
EC.L	0.000741	0.000752	0.27	0.07	0.48	0.10	2.79	0.008
EC.R	0.000737	0.000755	0.46	0.26	0.66	0.10	4.70	1.0E-05
FX.ST.L	0.000787	0.000795	0.10	-0.10	0.30	0.10	1.04	0.325
FX.ST.R	0.000781	0.000789	0.11	-0.09	0.32	0.10	1.15	0.274
PCR.L	0.000789	0.000800	0.21	0.01	0.41	0.10	2.15	0.042
PCR.R	0.000802	0.000810	0.14	-0.06	0.34	0.10	1.42	0.179
PLIC.L	0.000683	0.000686	0.08	-0.12	0.28	0.10	0.81	0.442
PLIC.R	0.000677	0.000683	0.12	-0.08	0.33	0.10	1.27	0.231
PTR.L	0.000820	0.000830	0.15	-0.05	0.35	0.10	1.51	0.152
PTR.R	0.000811	0.000828	0.22	0.02	0.42	0.10	2.25	0.034
RLIC.L	0.000778	0.000783	0.09	-0.11	0.29	0.10	0.92	0.384
RLIC.R	0.000776	0.000780	0.07	-0.13	0.27	0.10	0.73	0.492
SCR.L	0.000697	0.000703	0.16	-0.04	0.37	0.10	1.67	0.114
SCR.R	0.000696	0.000700	0.10	-0.10	0.31	0.10	1.07	0.311
SFO.L	0.000679	0.000678	0.00	-0.20	0.20	0.10	0.02	1.000
SFO.R	0.000669	0.000678	0.10	-0.10	0.31	0.10	1.07	0.311
SLF.L	0.000709	0.000715	0.19	-0.01	0.39	0.10	1.96	0.063
SLF.R	0.000705	0.000715	0.30	0.09	0.50	0.10	3.02	0.004
SS.L	0.000787	0.000798	0.19	-0.01	0.40	0.10	1.97	0.063
SS.R	0.000773	0.000796	0.42	0.22	0.63	0.10	4.31	4.8E-05
TAP.L	0.000936	0.000940	0.05	-0.16	0.25	0.10	0.48	0.652
TAP.R	0.000922	0.000926	0.05	-0.15	0.26	0.10	0.56	0.597
UNC.L	0.000761	0.000772	0.11	-0.09	0.32	0.10	1.16	0.272
UNC.R	0.000740	0.000777	0.42	0.22	0.63	0.10	4.33	4.4E-05

**Supplementary Table 17.** Effect sizes for MD differences between healthy controls and the ‘GGE’ syndrome.

ROI	Mean MD controls	Mean MD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageMD	0.000801	0.000799	-0.02	-0.22	0.17	0.10	-0.25	0.813
BCC	0.000881	0.000866	-0.13	-0.32	0.07	0.10	-1.36	0.200
GCC	0.000816	0.000788	-0.14	-0.34	0.05	0.10	-1.51	0.157
SCC	0.000791	0.000779	-0.14	-0.34	0.05	0.10	-1.52	0.154
ACR.L	0.000745	0.000753	0.16	-0.04	0.35	0.10	1.65	0.121
ACR.R	0.000739	0.000749	0.21	0.02	0.41	0.10	2.28	0.033
ALIC.L	0.000695	0.000688	-0.15	-0.35	0.04	0.10	-1.62	0.127
ALIC.R	0.000695	0.000694	-0.06	-0.26	0.13	0.10	-0.66	0.535
CGC.L	0.000738	0.000731	-0.12	-0.32	0.08	0.10	-1.27	0.233
CGC.R	0.000729	0.000721	-0.13	-0.33	0.07	0.10	-1.37	0.197
CGH.L	0.000876	0.000877	-0.09	-0.28	0.11	0.10	-0.93	0.384
CGH.R	0.000859	0.000857	-0.10	-0.30	0.09	0.10	-1.10	0.302
CST.L	0.000740	0.000726	-0.18	-0.38	0.01	0.10	-1.93	0.070
CST.R	0.000743	0.000722	-0.26	-0.46	-0.07	0.10	-2.79	0.009
EC.L	0.000741	0.000740	-0.06	-0.25	0.14	0.10	-0.61	0.566
EC.R	0.000737	0.000739	0.03	-0.17	0.22	0.10	0.31	0.772
FX.ST.L	0.000787	0.000779	-0.14	-0.33	0.06	0.10	-1.47	0.168
FX.ST.R	0.000781	0.000781	-0.03	-0.22	0.17	0.10	-0.28	0.795
PCR.L	0.000789	0.000801	0.21	0.01	0.40	0.10	2.18	0.040
PCR.R	0.000802	0.000815	0.23	0.04	0.43	0.10	2.48	0.020
PLIC.L	0.000683	0.000679	-0.20	-0.40	-0.01	0.10	-2.13	0.045
PLIC.R	0.000677	0.000674	-0.16	-0.35	0.04	0.10	-1.65	0.121
PTR.L	0.000820	0.000822	0.07	-0.13	0.26	0.10	0.71	0.502
PTR.R	0.000811	0.000818	0.12	-0.07	0.32	0.10	1.30	0.223
RLIC.L	0.000778	0.000777	-0.03	-0.22	0.17	0.10	-0.28	0.790
RLIC.R	0.000776	0.000770	-0.11	-0.30	0.09	0.10	-1.14	0.283
SCR.L	0.000697	0.000699	0.05	-0.14	0.25	0.10	0.58	0.585
SCR.R	0.000696	0.000698	0.04	-0.15	0.24	0.10	0.46	0.666
SFO.L	0.000679	0.000675	-0.04	-0.24	0.15	0.10	-0.45	0.676
SFO.R	0.000669	0.000677	0.08	-0.12	0.27	0.10	0.84	0.431
SLF.L	0.000709	0.000714	0.13	-0.06	0.33	0.10	1.40	0.190
SLF.R	0.000705	0.000711	0.18	-0.02	0.37	0.10	1.90	0.075
SS.L	0.000787	0.000786	-0.03	-0.22	0.17	0.10	-0.28	0.791
SS.R	0.000773	0.000774	0.02	-0.17	0.22	0.10	0.23	0.830
TAP.L	0.000936	0.000944	0.09	-0.11	0.28	0.10	0.93	0.381
TAP.R	0.000922	0.000930	0.11	-0.09	0.30	0.10	1.12	0.293
UNC.L	0.000761	0.000764	0.00	-0.20	0.19	0.10	-0.05	0.961
UNC.R	0.000740	0.000748	0.04	-0.16	0.23	0.10	0.39	0.713

**Supplementary Table 19.** Effect sizes for MD differences between healthy controls and the ‘ExE’ syndrome.

ROI	Mean MD controls	Mean MD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageMD	0.000801	0.000818	0.34	0.18	0.50	0.08	4.47	4.9E-05
BCC	0.000881	0.000902	0.24	0.08	0.40	0.08	3.21	0.004
GCC	0.000816	0.000830	0.17	0.01	0.33	0.08	2.25	0.041
SCC	0.000791	0.000806	0.15	-0.02	0.31	0.08	1.93	0.079
ACR.L	0.000745	0.000763	0.33	0.17	0.49	0.08	4.34	8.4E-05
ACR.R	0.000739	0.000754	0.29	0.13	0.46	0.08	3.89	4.0E-04
ALIC.L	0.000695	0.000704	0.09	-0.08	0.25	0.08	1.14	0.299
ALIC.R	0.000695	0.000701	0.06	-0.11	0.22	0.08	0.73	0.504
CGC.L	0.000738	0.000749	0.18	0.01	0.34	0.08	2.32	0.035
CGC.R	0.000729	0.000743	0.24	0.08	0.40	0.08	3.16	0.004
CGH.L	0.000876	0.000905	0.15	-0.01	0.31	0.08	1.94	0.078
CGH.R	0.000859	0.000877	0.08	-0.08	0.24	0.08	1.04	0.345
CST.L	0.000740	0.000750	0.05	-0.11	0.21	0.08	0.67	0.540
CST.R	0.000743	0.000754	0.07	-0.10	0.23	0.08	0.87	0.427
EC.L	0.000741	0.000749	0.17	0.01	0.33	0.08	2.26	0.040
EC.R	0.000737	0.000748	0.25	0.09	0.41	0.08	3.31	0.003
FX.ST.L	0.000787	0.000799	0.12	-0.05	0.28	0.08	1.54	0.161
FX.ST.R	0.000781	0.000797	0.18	0.01	0.34	0.08	2.32	0.035
PCR.L	0.000789	0.000804	0.25	0.09	0.41	0.08	3.30	0.003
PCR.R	0.000802	0.000817	0.25	0.08	0.41	0.08	3.26	0.003
PLIC.L	0.000683	0.000687	0.04	-0.12	0.20	0.08	0.54	0.625
PLIC.R	0.000677	0.000682	0.05	-0.11	0.21	0.08	0.66	0.544
PTR.L	0.000820	0.000830	0.14	-0.02	0.30	0.08	1.85	0.093
PTR.R	0.000811	0.000816	0.07	-0.09	0.23	0.08	0.94	0.392
RLIC.L	0.000778	0.000787	0.13	-0.03	0.30	0.08	1.78	0.105
RLIC.R	0.000776	0.000783	0.09	-0.07	0.25	0.08	1.16	0.291
SCR.L	0.000697	0.000709	0.27	0.11	0.44	0.08	3.64	9.6E-04
SCR.R	0.000696	0.000709	0.26	0.10	0.42	0.08	3.43	0.002
SFO.L	0.000679	0.000699	0.15	-0.01	0.31	0.08	1.97	0.073
SFO.R	0.000669	0.000687	0.18	0.02	0.34	0.08	2.35	0.033
SLF.L	0.000709	0.000720	0.30	0.14	0.46	0.08	4.01	2.6E-04
SLF.R	0.000705	0.000718	0.37	0.21	0.53	0.08	4.90	8.8E-06
SS.L	0.000787	0.000802	0.23	0.06	0.39	0.08	2.98	0.007
SS.R	0.000773	0.000783	0.16	-0.01	0.32	0.08	2.07	0.060
TAP.L	0.000936	0.000945	0.08	-0.08	0.24	0.08	1.05	0.338
TAP.R	0.000922	0.000932	0.10	-0.06	0.26	0.08	1.30	0.235
UNC.L	0.000761	0.000784	0.21	0.04	0.37	0.08	2.72	0.013
UNC.R	0.000740	0.000753	0.12	-0.04	0.29	0.08	1.65	0.130

**Supplementary Table 20.** Effect sizes for RD differences between healthy controls and the ‘All Epilepsies’ syndrome.

ROI	Mean RD controls	Mean RD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageRD	0.000556	0.000581	0.47	0.38	0.56	0.05	15.05	1.2E-24
BCC	0.000550	0.000582	0.31	0.22	0.40	0.05	10.08	4.6E-12
GCC	0.000505	0.000533	0.21	0.13	0.30	0.04	6.90	2.1E-06
SCC	0.000452	0.000462	0.10	0.01	0.19	0.04	3.27	0.024
ACR.L	0.000560	0.000582	0.38	0.29	0.47	0.05	12.24	5.6E-17
ACR.R	0.000550	0.000574	0.45	0.36	0.54	0.05	14.56	2.9E-23
ALIC.L	0.000460	0.000473	0.23	0.14	0.31	0.04	7.31	4.9E-07
ALIC.R	0.000458	0.000471	0.24	0.15	0.33	0.05	7.80	8.3E-08
CGC.L	0.000462	0.000488	0.39	0.30	0.48	0.05	12.62	5.7E-18
CGC.R	0.000492	0.000515	0.33	0.25	0.42	0.05	10.82	1.2E-13
CGH.L	0.000663	0.000695	0.26	0.17	0.35	0.05	8.33	9.8E-09
CGH.R	0.000641	0.000670	0.23	0.15	0.32	0.05	7.55	2.0E-07
CST.L	0.000514	0.000520	0.06	-0.03	0.15	0.04	1.91	0.188
CST.R	0.000523	0.000528	0.05	-0.03	0.14	0.04	1.73	0.232
EC.L	0.000552	0.000575	0.48	0.39	0.57	0.05	15.61	2.4E-26
EC.R	0.000551	0.000573	0.52	0.43	0.61	0.05	16.93	1.2E-30
FX.ST.L	0.000551	0.000570	0.24	0.15	0.33	0.05	7.70	1.1E-07
FX.ST.R	0.000549	0.000569	0.26	0.17	0.34	0.05	8.28	1.3E-08
PCR.L	0.000584	0.000601	0.31	0.22	0.40	0.05	10.10	3.8E-12
PCR.R	0.000593	0.000614	0.33	0.24	0.42	0.05	10.64	3.0E-13
PLIC.L	0.000390	0.000396	0.18	0.09	0.27	0.04	5.73	7.7E-05
PLIC.R	0.000384	0.000393	0.21	0.12	0.30	0.04	6.72	3.6E-06
PTR.L	0.000539	0.000558	0.24	0.15	0.33	0.05	7.70	1.2E-07
PTR.R	0.000532	0.000553	0.25	0.16	0.34	0.05	8.09	2.5E-08
RLIC.L	0.000505	0.000521	0.28	0.19	0.36	0.05	8.90	9.3E-10
RLIC.R	0.000521	0.000536	0.24	0.15	0.32	0.05	7.63	1.6E-07
SCR.L	0.000501	0.000515	0.32	0.23	0.41	0.05	10.47	7.2E-13
SCR.R	0.000501	0.000514	0.31	0.22	0.40	0.05	10.05	5.6E-12
SFO.L	0.000472	0.000490	0.17	0.08	0.26	0.04	5.56	1.2E-04
SFO.R	0.000461	0.000479	0.21	0.13	0.30	0.04	6.90	2.1E-06
SLF.L	0.000513	0.000528	0.40	0.31	0.49	0.05	13.04	5.0E-19
SLF.R	0.000509	0.000527	0.48	0.39	0.57	0.05	15.51	4.7E-26
SS.L	0.000539	0.000564	0.41	0.32	0.50	0.05	13.25	1.4E-19
SS.R	0.000532	0.000558	0.43	0.34	0.52	0.05	13.85	3.7E-21
TAP.L	0.000670	0.000692	0.14	0.05	0.23	0.04	4.46	0.002
TAP.R	0.000637	0.000661	0.15	0.06	0.24	0.04	4.81	9.0E-04
UNC.L	0.000544	0.000574	0.29	0.20	0.38	0.05	9.36	1.2E-10
UNC.R	0.000525	0.000557	0.33	0.24	0.41	0.05	10.52	4.8E-13

**Supplementary Table 21.** Effect sizes for RD differences between healthy controls and the ‘L TLE-HS’ syndrome.

ROI	Mean RD controls	Mean RD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageRD	0.000556	0.000591	0.66	0.52	0.79	0.07	10.96	5.1E-21
BCC	0.000550	0.000597	0.44	0.30	0.57	0.07	7.34	2.1E-10
GCC	0.000505	0.000556	0.35	0.22	0.49	0.07	5.88	3.4E-07
SCC	0.000452	0.000465	0.13	-0.01	0.26	0.07	2.12	0.064
ACR.L	0.000560	0.000595	0.57	0.44	0.71	0.07	9.56	1.9E-16
ACR.R	0.000550	0.000579	0.52	0.38	0.65	0.07	8.66	8.0E-14
ALIC.L	0.000460	0.000481	0.39	0.25	0.52	0.07	6.51	1.6E-08
ALIC.R	0.000458	0.000470	0.24	0.11	0.38	0.07	4.10	3.7E-04
CGC.L	0.000462	0.000507	0.69	0.55	0.82	0.07	11.46	1.1E-22
CGC.R	0.000492	0.000523	0.46	0.33	0.60	0.07	7.76	2.0E-11
CGH.L	0.000663	0.000738	0.67	0.53	0.81	0.07	11.21	7.4E-22
CGH.R	0.000641	0.000664	0.24	0.10	0.37	0.07	3.97	5.7E-04
CST.L	0.000514	0.000516	0.04	-0.09	0.17	0.07	0.67	0.556
CST.R	0.000523	0.000528	0.08	-0.05	0.22	0.07	1.40	0.221
EC.L	0.000552	0.000590	0.83	0.69	0.97	0.07	13.84	6.5E-32
EC.R	0.000551	0.000576	0.61	0.47	0.74	0.07	10.16	2.5E-18
FX.ST.L	0.000551	0.000598	0.59	0.46	0.73	0.07	9.91	1.5E-17
FX.ST.R	0.000549	0.000572	0.32	0.18	0.45	0.07	5.27	4.6E-06
PCR.L	0.000584	0.000610	0.45	0.31	0.58	0.07	7.49	9.0E-11
PCR.R	0.000593	0.000617	0.36	0.23	0.49	0.07	6.03	1.7E-07
PLIC.L	0.000390	0.000399	0.27	0.13	0.40	0.07	4.48	9.7E-05
PLIC.R	0.000384	0.000394	0.25	0.12	0.38	0.07	4.18	2.8E-04
PTR.L	0.000539	0.000572	0.36	0.22	0.49	0.07	6.01	1.8E-07
PTR.R	0.000532	0.000559	0.28	0.14	0.41	0.07	4.62	5.8E-05
RLIC.L	0.000505	0.000534	0.51	0.37	0.64	0.07	8.45	2.8E-13
RLIC.R	0.000521	0.000541	0.31	0.18	0.44	0.07	5.18	6.5E-06
SCR.L	0.000501	0.000520	0.40	0.27	0.54	0.07	6.74	5.3E-09
SCR.R	0.000501	0.000517	0.37	0.23	0.50	0.07	6.13	1.1E-07
SFO.L	0.000472	0.000499	0.25	0.12	0.39	0.07	4.23	2.4E-04
SFO.R	0.000461	0.000486	0.30	0.16	0.43	0.07	4.99	1.4E-05
SLF.L	0.000513	0.000535	0.56	0.43	0.70	0.07	9.44	5.1E-16
SLF.R	0.000509	0.000529	0.53	0.40	0.67	0.07	8.89	1.7E-14
SS.L	0.000539	0.000588	0.79	0.65	0.92	0.07	13.15	5.1E-29
SS.R	0.000532	0.000559	0.44	0.30	0.57	0.07	7.33	2.2E-10
TAP.L	0.000670	0.000708	0.22	0.08	0.35	0.07	3.61	0.002
TAP.R	0.000637	0.000664	0.14	0.01	0.27	0.07	2.32	0.043
UNC.L	0.000544	0.000593	0.47	0.34	0.61	0.07	7.88	9.7E-12
UNC.R	0.000525	0.000556	0.33	0.20	0.47	0.07	5.59	1.1E-06

**Supplementary Table 22.** Effect sizes for RD differences between healthy controls and the ‘R TLE-HS’ syndrome.

ROI	Mean RD controls	Mean RD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageRD	0.000556	0.000593	0.70	0.55	0.85	0.08	10.39	7.3E-20
BCC	0.000550	0.000610	0.56	0.41	0.71	0.08	8.29	2.4E-13
GCC	0.000505	0.000565	0.39	0.24	0.54	0.08	5.79	2.5E-07
SCC	0.000452	0.000478	0.26	0.12	0.41	0.08	3.88	5.4E-04
ACR.L	0.000560	0.000591	0.51	0.36	0.66	0.08	7.57	2.1E-11
ACR.R	0.000550	0.000589	0.69	0.54	0.84	0.08	10.23	2.5E-19
ALIC.L	0.000460	0.000472	0.25	0.10	0.40	0.08	3.66	0.001
ALIC.R	0.000458	0.000481	0.43	0.28	0.58	0.08	6.36	1.6E-08
CGC.L	0.000462	0.000492	0.48	0.33	0.63	0.08	7.08	3.3E-10
CGC.R	0.000492	0.000530	0.57	0.42	0.72	0.08	8.44	9.2E-14
CGH.L	0.000663	0.000679	0.21	0.06	0.36	0.08	3.09	0.006
CGH.R	0.000641	0.000709	0.61	0.46	0.76	0.08	9.05	1.5E-15
CST.L	0.000514	0.000515	0.02	-0.13	0.17	0.08	0.29	0.798
CST.R	0.000523	0.000526	0.06	-0.08	0.21	0.08	0.92	0.409
EC.L	0.000552	0.000580	0.63	0.48	0.78	0.08	9.34	2.1E-16
EC.R	0.000551	0.000586	0.84	0.69	0.99	0.08	12.47	1.8E-27
FX.ST.L	0.000551	0.000558	0.12	-0.03	0.27	0.08	1.77	0.113
FX.ST.R	0.000549	0.000589	0.52	0.37	0.67	0.08	7.74	7.0E-12
PCR.L	0.000584	0.000602	0.31	0.16	0.46	0.08	4.62	3.7E-05
PCR.R	0.000593	0.000621	0.42	0.28	0.57	0.08	6.27	2.7E-08
PLIC.L	0.000390	0.000396	0.19	0.04	0.34	0.08	2.84	0.011
PLIC.R	0.000384	0.000396	0.30	0.15	0.45	0.08	4.44	8.2E-05
PTR.L	0.000539	0.000557	0.19	0.04	0.33	0.08	2.76	0.014
PTR.R	0.000532	0.000562	0.31	0.16	0.45	0.08	4.54	5.3E-05
RLIC.L	0.000505	0.000517	0.21	0.06	0.36	0.08	3.09	0.006
RLIC.R	0.000521	0.000542	0.33	0.18	0.47	0.08	4.83	1.8E-05
SCR.L	0.000501	0.000518	0.38	0.23	0.53	0.08	5.61	6.0E-07
SCR.R	0.000501	0.000519	0.40	0.25	0.55	0.08	5.89	1.8E-07
SFO.L	0.000472	0.000499	0.27	0.12	0.42	0.08	3.96	4.0E-04
SFO.R	0.000461	0.000487	0.30	0.15	0.45	0.08	4.41	8.4E-05
SLF.L	0.000513	0.000530	0.45	0.30	0.60	0.08	6.61	4.5E-09
SLF.R	0.000509	0.000533	0.62	0.47	0.77	0.08	9.22	4.1E-16
SS.L	0.000539	0.000562	0.39	0.24	0.54	0.08	5.73	3.5E-07
SS.R	0.000532	0.000579	0.76	0.61	0.91	0.08	11.25	6.8E-23
TAP.L	0.000670	0.000717	0.27	0.12	0.42	0.08	3.98	4.0E-04
TAP.R	0.000637	0.000687	0.27	0.12	0.42	0.08	4.00	3.7E-04
UNC.L	0.000544	0.000569	0.27	0.12	0.42	0.08	4.02	3.4E-04
UNC.R	0.000525	0.000591	0.72	0.57	0.87	0.08	10.69	6.4E-21

**Supplementary Table 23.** Effect sizes for RD differences between healthy controls and the ‘L TLE-NL’ syndrome.

ROI	Mean RD controls	Mean RD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageRD	0.000556	0.000568	0.25	0.08	0.42	0.09	-24.62	0.004
BCC	0.000550	0.000554	0.05	-0.12	0.22	0.09	-20.69	0.545
GCC	0.000505	0.000492	-0.09	-0.26	0.08	0.09	-20.66	0.280
SCC	0.000452	0.000446	-0.07	-0.24	0.10	0.09	-12.40	0.395
ACR.L	0.000560	0.000567	0.14	-0.03	0.31	0.09	-17.31	0.104
ACR.R	0.000550	0.000563	0.27	0.10	0.44	0.09	-17.99	0.002
ALIC.L	0.000460	0.000466	0.13	-0.04	0.30	0.09	-16.61	0.138
ALIC.R	0.000458	0.000464	0.14	-0.03	0.31	0.09	-11.76	0.116
CGC.L	0.000462	0.000473	0.19	0.02	0.36	0.09	-19.73	0.031
CGC.R	0.000492	0.000501	0.14	-0.03	0.31	0.09	-17.62	0.114
CGH.L	0.000663	0.000664	0.01	-0.16	0.18	0.09	-18.10	0.877
CGH.R	0.000641	0.000637	-0.03	-0.20	0.14	0.09	-16.93	0.699
CST.L	0.000514	0.000526	0.11	-0.06	0.28	0.09	-3.22	0.222
CST.R	0.000523	0.000527	0.04	-0.14	0.21	0.09	-3.35	0.687
EC.L	0.000552	0.000566	0.33	0.15	0.50	0.09	-22.43	1.8E-04
EC.R	0.000551	0.000567	0.40	0.23	0.57	0.09	-22.01	4.1E-06
FX.ST.L	0.000551	0.000558	0.11	-0.06	0.28	0.09	-14.33	0.227
FX.ST.R	0.000549	0.000552	0.05	-0.12	0.22	0.09	-13.93	0.593
PCR.L	0.000584	0.000595	0.22	0.05	0.39	0.09	-13.25	0.011
PCR.R	0.000593	0.000608	0.26	0.09	0.43	0.09	-14.43	0.003
PLIC.L	0.000390	0.000395	0.17	0.00	0.34	0.09	-6.07	0.057
PLIC.R	0.000384	0.000393	0.24	0.07	0.41	0.09	-6.23	0.005
PTR.L	0.000539	0.000552	0.18	0.01	0.35	0.09	-14.00	0.036
PTR.R	0.000532	0.000546	0.17	0.00	0.34	0.09	-14.35	0.047
RLIC.L	0.000505	0.000515	0.19	0.02	0.36	0.09	-14.08	0.028
RLIC.R	0.000521	0.000531	0.17	0.00	0.34	0.09	-13.03	0.052
SCR.L	0.000501	0.000511	0.24	0.07	0.41	0.09	-14.60	0.006
SCR.R	0.000501	0.000511	0.26	0.09	0.43	0.09	-13.45	0.003
SFO.L	0.000472	0.000474	0.03	-0.14	0.20	0.09	-11.88	0.696
SFO.R	0.000461	0.000470	0.12	-0.05	0.29	0.09	-9.02	0.171
SLF.L	0.000513	0.000523	0.30	0.13	0.47	0.09	-16.24	0.001
SLF.R	0.000509	0.000525	0.43	0.26	0.60	0.09	-16.84	7.7E-07
SS.L	0.000539	0.000554	0.28	0.11	0.45	0.09	-19.04	0.001
SS.R	0.000532	0.000550	0.32	0.15	0.49	0.09	-18.13	2.6E-04
TAP.L	0.000670	0.000668	-0.01	-0.18	0.16	0.09	-12.06	0.924
TAP.R	0.000637	0.000642	0.04	-0.13	0.21	0.09	-10.09	0.673
UNC.L	0.000544	0.000567	0.24	0.07	0.41	0.09	-11.64	0.006
UNC.R	0.000525	0.000534	0.09	-0.08	0.26	0.09	-13.80	0.282

**Supplementary Table 24.** Effect sizes for RD differences between healthy controls and the ‘R TLE-NL’ syndrome.

ROI	Mean RD controls	Mean RD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageRD	0.000556	0.000567	0.23	0.07	0.39	0.08	3.19	0.019
BCC	0.000550	0.000558	0.09	-0.07	0.26	0.08	1.31	0.333
GCC	0.000505	0.000512	0.09	-0.07	0.25	0.08	1.22	0.368
SCC	0.000452	0.000450	-0.03	-0.19	0.13	0.08	-0.37	0.786
ACR.L	0.000560	0.000566	0.13	-0.04	0.29	0.08	1.74	0.200
ACR.R	0.000550	0.000562	0.24	0.08	0.40	0.08	3.31	0.015
ALIC.L	0.000460	0.000465	0.09	-0.07	0.25	0.08	1.23	0.364
ALIC.R	0.000458	0.000468	0.18	0.01	0.34	0.08	2.43	0.072
CGC.L	0.000462	0.000477	0.21	0.05	0.38	0.08	2.98	0.029
CGC.R	0.000492	0.000507	0.21	0.05	0.37	0.08	2.90	0.033
CGH.L	0.000663	0.000672	0.04	-0.12	0.20	0.08	0.61	0.655
CGH.R	0.000641	0.000673	0.24	0.07	0.40	0.08	3.28	0.016
CST.L	0.000514	0.000525	0.08	-0.08	0.24	0.08	1.16	0.394
CST.R	0.000523	0.000527	0.02	-0.14	0.18	0.08	0.29	0.831
EC.L	0.000552	0.000567	0.33	0.17	0.49	0.08	4.54	8.0E-04
EC.R	0.000551	0.000572	0.50	0.33	0.66	0.08	6.91	4.0E-07
FX.ST.L	0.000551	0.000562	0.13	-0.03	0.30	0.08	1.87	0.168
FX.ST.R	0.000549	0.000563	0.17	0.01	0.34	0.08	2.42	0.074
PCR.L	0.000584	0.000594	0.19	0.03	0.35	0.08	2.61	0.053
PCR.R	0.000593	0.000603	0.17	0.01	0.33	0.08	2.35	0.083
PLIC.L	0.000390	0.000394	0.12	-0.04	0.28	0.08	1.66	0.220
PLIC.R	0.000384	0.000391	0.15	-0.01	0.31	0.08	2.04	0.133
PTR.L	0.000539	0.000545	0.10	-0.06	0.26	0.08	1.43	0.292
PTR.R	0.000532	0.000544	0.16	0.00	0.32	0.08	2.20	0.104
RLIC.L	0.000505	0.000513	0.15	-0.02	0.31	0.08	2.03	0.135
RLIC.R	0.000521	0.000530	0.15	-0.01	0.31	0.08	2.06	0.129
SCR.L	0.000501	0.000509	0.19	0.02	0.35	0.08	2.59	0.057
SCR.R	0.000501	0.000507	0.15	-0.01	0.31	0.08	2.13	0.117
SFO.L	0.000472	0.000463	-0.08	-0.24	0.08	0.08	-1.13	0.405
SFO.R	0.000461	0.000459	-0.02	-0.18	0.14	0.08	-0.32	0.813
SLF.L	0.000513	0.000520	0.20	0.04	0.36	0.08	2.76	0.042
SLF.R	0.000509	0.000520	0.30	0.14	0.46	0.08	4.16	0.002
SS.L	0.000539	0.000550	0.21	0.04	0.37	0.08	2.85	0.035
SS.R	0.000532	0.000558	0.44	0.27	0.60	0.08	6.04	9.1E-06
TAP.L	0.000670	0.000654	-0.08	-0.24	0.08	0.08	-1.15	0.398
TAP.R	0.000637	0.000637	0.02	-0.15	0.18	0.08	0.22	0.869
UNC.L	0.000544	0.000565	0.20	0.04	0.36	0.08	2.74	0.044
UNC.R	0.000525	0.000560	0.35	0.18	0.51	0.08	4.79	4.0E-04

**Supplementary Table 25.** Effect sizes for RD differences between healthy controls and the ‘GGE’ syndrome.

ROI	Mean RD controls	Mean RD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageRD	0.000556	0.000563	0.17	-0.02	0.37	0.10	1.86	0.081
BCC	0.000550	0.000550	0.04	-0.15	0.24	0.10	0.46	0.664
GCC	0.000505	0.000498	0.04	-0.16	0.23	0.10	0.39	0.713
SCC	0.000452	0.000439	-0.14	-0.33	0.05	0.10	-1.49	0.163
ACR.L	0.000560	0.000572	0.26	0.07	0.45	0.10	2.79	0.009
ACR.R	0.000550	0.000566	0.36	0.16	0.55	0.10	3.83	3.4E-04
ALIC.L	0.000460	0.000464	0.06	-0.14	0.25	0.10	0.62	0.563
ALIC.R	0.000458	0.000465	0.12	-0.07	0.31	0.10	1.30	0.223
CGC.L	0.000462	0.000468	0.09	-0.10	0.28	0.10	0.97	0.361
CGC.R	0.000492	0.000494	0.03	-0.17	0.22	0.10	0.29	0.782
CGH.L	0.000663	0.000671	-0.02	-0.21	0.18	0.10	-0.18	0.869
CGH.R	0.000641	0.000652	0.02	-0.17	0.21	0.10	0.23	0.830
CST.L	0.000514	0.000510	-0.07	-0.26	0.13	0.10	-0.72	0.496
CST.R	0.000523	0.000515	-0.12	-0.32	0.07	0.10	-1.33	0.210
EC.L	0.000552	0.000558	0.12	-0.07	0.32	0.10	1.34	0.208
EC.R	0.000551	0.000560	0.21	0.02	0.41	0.10	2.28	0.032
FX.ST.L	0.000551	0.000548	-0.05	-0.24	0.14	0.10	-0.54	0.611
FX.ST.R	0.000549	0.000555	0.08	-0.11	0.27	0.10	0.84	0.428
PCR.L	0.000584	0.000599	0.31	0.12	0.51	0.10	3.37	0.002
PCR.R	0.000593	0.000614	0.39	0.19	0.58	0.10	4.14	1.1E-04
PLIC.L	0.000390	0.000389	-0.03	-0.22	0.17	0.10	-0.27	0.800
PLIC.R	0.000384	0.000384	-0.01	-0.20	0.18	0.10	-0.11	0.916
PTR.L	0.000539	0.000549	0.19	0.00	0.39	0.10	2.07	0.052
PTR.R	0.000532	0.000551	0.29	0.10	0.49	0.10	3.15	0.003
RLIC.L	0.000505	0.000515	0.18	-0.01	0.38	0.10	1.95	0.066
RLIC.R	0.000521	0.000526	0.11	-0.09	0.30	0.10	1.16	0.275
SCR.L	0.000501	0.000508	0.21	0.02	0.40	0.10	2.26	0.034
SCR.R	0.000501	0.000508	0.19	0.00	0.39	0.10	2.06	0.053
SFO.L	0.000472	0.000477	0.06	-0.14	0.25	0.10	0.61	0.564
SFO.R	0.000461	0.000471	0.11	-0.08	0.31	0.10	1.20	0.258
SLF.L	0.000513	0.000524	0.32	0.13	0.52	0.10	3.48	0.001
SLF.R	0.000509	0.000522	0.37	0.18	0.57	0.10	3.99	1.9E-04
SS.L	0.000539	0.000544	0.11	-0.08	0.31	0.10	1.23	0.249
SS.R	0.000532	0.000542	0.19	0.00	0.38	0.10	2.03	0.056
TAP.L	0.000670	0.000680	0.09	-0.11	0.28	0.10	0.93	0.380
TAP.R	0.000637	0.000658	0.18	-0.01	0.37	0.10	1.93	0.070
UNC.L	0.000544	0.000551	0.06	-0.14	0.25	0.10	0.60	0.574
UNC.R	0.000525	0.000528	-0.01	-0.20	0.19	0.10	-0.09	0.934

**Supplementary Table 26.** Effect sizes for RD differences between healthy controls and the ‘ExE’ syndrome.

ROI	Mean RD controls	Mean RD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageRD	0.000556	0.000579	0.48	0.32	0.64	0.08	6.39	7.6E-09
BCC	0.000550	0.000585	0.39	0.22	0.55	0.08	5.11	3.5E-06
GCC	0.000505	0.000530	0.29	0.13	0.45	0.08	3.87	4.4E-04
SCC	0.000452	0.000474	0.23	0.07	0.40	0.08	3.10	0.005
ACR.L	0.000560	0.000581	0.42	0.26	0.59	0.08	5.62	3.6E-07
ACR.R	0.000550	0.000572	0.46	0.30	0.62	0.08	6.11	3.3E-08
ALIC.L	0.000460	0.000477	0.27	0.10	0.43	0.08	3.53	0.001
ALIC.R	0.000458	0.000473	0.26	0.10	0.42	0.08	3.45	0.002
CGC.L	0.000462	0.000485	0.37	0.21	0.53	0.08	4.91	8.5E-06
CGC.R	0.000492	0.000516	0.36	0.20	0.53	0.08	4.82	1.2E-05
CGH.L	0.000663	0.000701	0.24	0.08	0.40	0.08	3.21	0.003
CGH.R	0.000641	0.000667	0.16	0.00	0.32	0.08	2.10	0.056
CST.L	0.000514	0.000532	0.14	-0.02	0.30	0.08	1.89	0.086
CST.R	0.000523	0.000541	0.15	-0.01	0.32	0.08	2.04	0.063
EC.L	0.000552	0.000570	0.38	0.22	0.55	0.08	5.09	3.9E-06
EC.R	0.000551	0.000569	0.43	0.27	0.59	0.08	5.71	2.2E-07
FX.ST.L	0.000551	0.000569	0.21	0.05	0.37	0.08	2.83	0.010
FX.ST.R	0.000549	0.000566	0.22	0.05	0.38	0.08	2.85	0.009
PCR.L	0.000584	0.000599	0.29	0.13	0.45	0.08	3.82	5.1E-04
PCR.R	0.000593	0.000611	0.32	0.16	0.48	0.08	4.27	1.1E-04
PLIC.L	0.000390	0.000398	0.22	0.05	0.38	0.08	2.86	0.009
PLIC.R	0.000384	0.000393	0.21	0.05	0.37	0.08	2.78	0.011
PTR.L	0.000539	0.000555	0.26	0.10	0.42	0.08	3.42	0.002
PTR.R	0.000532	0.000545	0.21	0.05	0.37	0.08	2.82	0.010
RLIC.L	0.000505	0.000517	0.23	0.07	0.39	0.08	3.04	0.006
RLIC.R	0.000521	0.000532	0.19	0.03	0.35	0.08	2.48	0.024
SCR.L	0.000501	0.000515	0.38	0.22	0.54	0.08	5.05	4.4E-06
SCR.R	0.000501	0.000516	0.38	0.22	0.54	0.08	5.00	5.7E-06
SFO.L	0.000472	0.000501	0.29	0.13	0.45	0.08	3.81	5.5E-04
SFO.R	0.000461	0.000486	0.27	0.11	0.44	0.08	3.64	9.5E-04
SLF.L	0.000513	0.000528	0.43	0.27	0.59	0.08	5.70	2.6E-07
SLF.R	0.000509	0.000526	0.49	0.33	0.65	0.08	6.48	4.4E-09
SS.L	0.000539	0.000556	0.31	0.15	0.47	0.08	4.11	1.9E-04
SS.R	0.000532	0.000550	0.33	0.16	0.49	0.08	4.32	9.0E-05
TAP.L	0.000670	0.000688	0.13	-0.03	0.29	0.08	1.72	0.118
TAP.R	0.000637	0.000657	0.16	0.00	0.32	0.08	2.15	0.051
UNC.L	0.000544	0.000578	0.32	0.15	0.48	0.08	4.18	1.5E-04
UNC.R	0.000525	0.000553	0.28	0.12	0.45	0.08	3.76	6.3E-04

**Supplementary Table 27.** Effect sizes for AD differences between healthy controls and the ‘All Epilepsies’ syndrome.

ROI	Mean AD controls	Mean AD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageAD	0.00132	0.00132	0.01	-0.08	0.10	0.04	0.34	0.816
BCC	0.00156	0.00156	0.00	-0.09	0.08	0.04	-0.13	0.930
GCC	0.00149	0.00150	0.06	-0.02	0.15	0.04	2.07	0.157
SCC	0.00153	0.00154	0.06	-0.03	0.15	0.04	1.91	0.190
ACR.L	0.00114	0.00115	0.16	0.07	0.24	0.04	5.16	4.4E-04
ACR.R	0.00114	0.00115	0.17	0.08	0.26	0.04	5.55	1.5E-04
ALIC.L	0.00120	0.00119	-0.04	-0.13	0.04	0.04	-1.48	0.312
ALIC.R	0.00120	0.00120	-0.03	-0.11	0.06	0.04	-0.90	0.536
CGC.L	0.00131	0.00130	-0.17	-0.26	-0.08	0.04	-5.51	1.7E-04
CGC.R	0.00124	0.00123	-0.11	-0.20	-0.02	0.04	-3.62	0.013
CGH.L	0.00132	0.00132	-0.01	-0.09	0.08	0.04	-0.21	0.884
CGH.R	0.00131	0.00131	0.01	-0.08	0.09	0.04	0.25	0.862
CST.L	0.00122	0.00123	0.04	-0.04	0.13	0.04	1.39	0.340
CST.R	0.00121	0.00121	0.04	-0.05	0.13	0.04	1.30	0.373
EC.L	0.00114	0.00114	0.06	-0.03	0.15	0.04	2.02	0.167
EC.R	0.00113	0.00114	0.08	-0.01	0.16	0.04	2.51	0.086
FX.ST.L	0.00130	0.00129	-0.03	-0.11	0.06	0.04	-0.89	0.543
FX.ST.R	0.00129	0.00129	0.03	-0.05	0.12	0.04	1.12	0.445
PCR.L	0.00122	0.00123	0.15	0.07	0.24	0.04	5.08	0.001
PCR.R	0.00123	0.00125	0.19	0.10	0.27	0.04	6.15	2.8E-05
PLIC.L	0.00131	0.00130	-0.01	-0.10	0.07	0.04	-0.47	0.750
PLIC.R	0.00130	0.00130	0.05	-0.04	0.13	0.04	1.53	0.296
PTR.L	0.00141	0.00141	0.03	-0.05	0.12	0.04	1.06	0.470
PTR.R	0.00140	0.00140	0.01	-0.08	0.10	0.04	0.36	0.803
RLIC.L	0.00135	0.00135	0.01	-0.08	0.09	0.04	0.24	0.872
RLIC.R	0.00131	0.00131	0.08	0.00	0.17	0.04	2.78	0.057
SCR.L	0.00112	0.00112	0.11	0.02	0.20	0.04	3.67	0.012
SCR.R	0.00110	0.00111	0.14	0.05	0.23	0.04	4.61	0.002
SFO.L	0.00112	0.00112	0.02	-0.06	0.11	0.04	0.81	0.579
SFO.R	0.00112	0.00112	0.05	-0.04	0.14	0.04	1.66	0.257
SLF.L	0.00113	0.00113	0.02	-0.07	0.10	0.04	0.53	0.718
SLF.R	0.00113	0.00113	0.07	-0.02	0.16	0.04	2.35	0.107
SS.L	0.00132	0.00133	0.09	0.00	0.18	0.04	3.02	0.039
SS.R	0.00129	0.00129	0.12	0.04	0.21	0.04	4.07	0.005
TAP.L	0.00149	0.00150	0.08	-0.01	0.16	0.04	2.47	0.092
TAP.R	0.00150	0.00151	0.06	-0.03	0.14	0.04	1.89	0.195
UNC.L	0.00123	0.00124	0.03	-0.06	0.12	0.04	0.97	0.509
UNC.R	0.00123	0.00124	0.13	0.05	0.22	0.04	4.36	0.003

**Supplementary Table 28.** Effect sizes for AD differences between healthy controls and the ‘L TLE-HS’ syndrome.

ROI	Mean AD controls	Mean AD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageAD	0.00132	0.00133	0.17	0.04	0.30	0.07	2.87	0.013
BCC	0.00156	0.00157	0.10	-0.03	0.23	0.07	1.71	0.135
GCC	0.00149	0.00151	0.18	0.05	0.32	0.07	3.11	0.007
SCC	0.00153	0.00154	0.14	0.01	0.27	0.07	2.38	0.038
ACR.L	0.00114	0.00116	0.29	0.16	0.42	0.07	4.94	1.9E-05
ACR.R	0.00114	0.00115	0.22	0.09	0.35	0.07	3.75	0.001
ALIC.L	0.00120	0.00120	0.06	-0.07	0.20	0.07	1.10	0.338
ALIC.R	0.00120	0.00120	0.05	-0.08	0.18	0.07	0.81	0.480
CGC.L	0.00131	0.00130	-0.15	-0.29	-0.02	0.07	-2.62	0.023
CGC.R	0.00124	0.00123	-0.11	-0.25	0.02	0.07	-1.94	0.091
CGH.L	0.00132	0.00133	0.13	-0.01	0.26	0.07	2.12	0.065
CGH.R	0.00131	0.00131	0.09	-0.04	0.22	0.07	1.51	0.187
CST.L	0.00122	0.00123	0.09	-0.04	0.22	0.07	1.49	0.196
CST.R	0.00121	0.00121	0.08	-0.05	0.21	0.07	1.39	0.225
EC.L	0.00114	0.00115	0.23	0.10	0.37	0.07	3.96	0.001
EC.R	0.00113	0.00114	0.13	-0.01	0.26	0.07	2.14	0.063
FX.ST.L	0.00130	0.00130	0.10	-0.04	0.23	0.07	1.61	0.162
FX.ST.R	0.00129	0.00129	0.07	-0.06	0.20	0.07	1.21	0.295
PCR.L	0.00122	0.00123	0.24	0.11	0.38	0.07	4.11	3.7E-04
PCR.R	0.00123	0.00124	0.15	0.02	0.29	0.07	2.60	0.023
PLIC.L	0.00131	0.00131	0.07	-0.06	0.21	0.07	1.26	0.274
PLIC.R	0.00130	0.00130	0.13	0.00	0.27	0.07	2.26	0.050
PTR.L	0.00141	0.00142	0.12	-0.02	0.25	0.07	1.97	0.085
PTR.R	0.00140	0.00140	0.02	-0.11	0.15	0.07	0.32	0.780
RLIC.L	0.00135	0.00135	0.11	-0.02	0.24	0.07	1.83	0.111
RLIC.R	0.00131	0.00131	0.11	-0.02	0.24	0.07	1.87	0.104
SCR.L	0.00112	0.00113	0.28	0.15	0.42	0.07	4.81	3.2E-05
SCR.R	0.00110	0.00111	0.17	0.04	0.30	0.07	2.86	0.013
SFO.L	0.00112	0.00112	0.09	-0.04	0.22	0.07	1.54	0.181
SFO.R	0.00112	0.00112	0.10	-0.03	0.24	0.07	1.75	0.128
SLF.L	0.00113	0.00113	0.07	-0.06	0.21	0.07	1.26	0.274
SLF.R	0.00113	0.00113	0.10	-0.03	0.23	0.07	1.68	0.144
SS.L	0.00132	0.00134	0.34	0.21	0.47	0.07	5.73	6.6E-07
SS.R	0.00129	0.00129	0.04	-0.09	0.17	0.07	0.70	0.542
TAP.L	0.00149	0.00150	0.09	-0.04	0.22	0.07	1.56	0.174
TAP.R	0.00150	0.00150	0.00	-0.13	0.13	0.07	0.00	1.000
UNC.L	0.00123	0.00125	0.15	0.01	0.28	0.07	2.48	0.031
UNC.R	0.00123	0.00124	0.18	0.05	0.32	0.07	3.11	0.007

**Supplementary Table 29.** Effect sizes for AD differences between healthy controls and the ‘R TLE-HS’ syndrome.

ROI	Mean AD controls	Mean AD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageAD	0.00132	0.00133	0.16	0.01	0.30	0.07	2.40	0.034
BCC	0.00156	0.00157	0.09	-0.06	0.23	0.07	1.30	0.247
GCC	0.00149	0.00151	0.17	0.02	0.31	0.07	2.55	0.023
SCC	0.00153	0.00154	0.10	-0.05	0.24	0.07	1.47	0.191
ACR.L	0.00114	0.00116	0.24	0.09	0.38	0.07	3.61	0.001
ACR.R	0.00114	0.00116	0.35	0.21	0.50	0.07	5.38	2.0E-06
ALIC.L	0.00120	0.00119	0.01	-0.13	0.16	0.07	0.19	0.869
ALIC.R	0.00120	0.00120	0.06	-0.08	0.21	0.07	0.93	0.407
CGC.L	0.00131	0.00129	-0.31	-0.46	-0.17	0.07	-4.75	2.7E-05
CGC.R	0.00124	0.00122	-0.18	-0.33	-0.04	0.07	-2.78	0.013
CGH.L	0.00132	0.00130	-0.04	-0.19	0.10	0.07	-0.64	0.570
CGH.R	0.00131	0.00130	-0.02	-0.16	0.13	0.07	-0.27	0.807
CST.L	0.00122	0.00122	0.03	-0.11	0.18	0.07	0.53	0.636
CST.R	0.00121	0.00121	0.03	-0.12	0.17	0.07	0.40	0.722
EC.L	0.00114	0.00114	0.02	-0.12	0.16	0.07	0.29	0.795
EC.R	0.00113	0.00113	0.10	-0.05	0.24	0.07	1.49	0.186
FX.ST.L	0.00130	0.00128	-0.12	-0.26	0.03	0.07	-1.79	0.110
FX.ST.R	0.00129	0.00130	0.15	0.01	0.29	0.07	2.27	0.044
PCR.L	0.00122	0.00123	0.21	0.06	0.35	0.07	3.18	0.005
PCR.R	0.00123	0.00126	0.41	0.26	0.55	0.07	6.18	4.9E-08
PLIC.L	0.00131	0.00130	0.00	-0.14	0.15	0.07	0.05	1.000
PLIC.R	0.00130	0.00130	0.10	-0.04	0.25	0.07	1.59	0.159
PTR.L	0.00141	0.00141	0.04	-0.11	0.18	0.07	0.55	0.626
PTR.R	0.00140	0.00140	0.08	-0.06	0.22	0.07	1.23	0.274
RLIC.L	0.00135	0.00134	-0.01	-0.16	0.13	0.07	-0.21	0.853
RLIC.R	0.00131	0.00131	0.18	0.04	0.32	0.07	2.75	0.015
SCR.L	0.00112	0.00111	0.08	-0.07	0.22	0.07	1.17	0.298
SCR.R	0.00110	0.00112	0.29	0.14	0.43	0.07	4.34	1.2E-04
SFO.L	0.00112	0.00111	0.03	-0.11	0.17	0.07	0.45	0.691
SFO.R	0.00112	0.00112	0.06	-0.09	0.20	0.07	0.85	0.451
SLF.L	0.00113	0.00113	-0.04	-0.19	0.10	0.07	-0.67	0.550
SLF.R	0.00113	0.00113	0.06	-0.09	0.20	0.07	0.89	0.430
SS.L	0.00132	0.00132	0.01	-0.14	0.15	0.07	0.10	0.932
SS.R	0.00129	0.00131	0.44	0.29	0.58	0.07	6.65	4.3E-09
TAP.L	0.00149	0.00150	0.09	-0.06	0.23	0.07	1.32	0.243
TAP.R	0.00150	0.00153	0.16	0.02	0.30	0.07	2.43	0.031
UNC.L	0.00123	0.00122	-0.09	-0.23	0.06	0.07	-1.30	0.250
UNC.R	0.00123	0.00124	0.15	0.01	0.30	0.07	2.35	0.037

**Supplementary Table 30.** Effect sizes for AD differences between healthy controls and the ‘L TLE-NL’ syndrome.

ROI	Mean AD controls	Mean AD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageAD	0.00132	0.00132	-0.06	-0.23	0.11	0.09	-0.74	0.491
BCC	0.00156	0.00156	-0.04	-0.21	0.13	0.09	-0.54	0.615
GCC	0.00149	0.00148	-0.03	-0.20	0.14	0.09	-0.41	0.705
SCC	0.00153	0.00152	-0.08	-0.25	0.09	0.09	-0.97	0.372
ACR.L	0.00114	0.00115	0.09	-0.07	0.26	0.09	1.18	0.275
ACR.R	0.00114	0.00115	0.11	-0.06	0.28	0.09	1.41	0.193
ALIC.L	0.00120	0.00120	0.01	-0.16	0.18	0.09	0.10	0.928
ALIC.R	0.00120	0.00120	0.03	-0.14	0.20	0.09	0.37	0.729
CGC.L	0.00131	0.00131	0.03	-0.14	0.20	0.09	0.39	0.718
CGC.R	0.00124	0.00124	0.02	-0.15	0.18	0.09	0.20	0.853
CGH.L	0.00132	0.00131	-0.05	-0.22	0.12	0.09	-0.64	0.555
CGH.R	0.00131	0.00130	-0.01	-0.17	0.16	0.09	-0.08	0.943
CST.L	0.00122	0.00124	0.11	-0.06	0.28	0.09	1.34	0.214
CST.R	0.00121	0.00123	0.17	0.00	0.34	0.09	2.10	0.053
EC.L	0.00114	0.00114	0.07	-0.10	0.24	0.09	0.89	0.409
EC.R	0.00113	0.00114	0.10	-0.07	0.27	0.09	1.25	0.249
FX.ST.L	0.00130	0.00129	-0.08	-0.25	0.08	0.09	-1.05	0.331
FX.ST.R	0.00129	0.00128	-0.07	-0.24	0.10	0.09	-0.91	0.399
PCR.L	0.00122	0.00122	0.10	-0.07	0.27	0.09	1.21	0.262
PCR.R	0.00123	0.00124	0.14	-0.03	0.31	0.09	1.77	0.101
PLIC.L	0.00131	0.00131	0.07	-0.10	0.24	0.09	0.89	0.409
PLIC.R	0.00130	0.00131	0.18	0.01	0.35	0.09	2.27	0.035
PTR.L	0.00141	0.00141	-0.01	-0.18	0.15	0.09	-0.18	0.865
PTR.R	0.00140	0.00140	0.02	-0.15	0.19	0.09	0.29	0.791
RLIC.L	0.00135	0.00135	0.03	-0.14	0.20	0.09	0.35	0.744
RLIC.R	0.00131	0.00131	0.12	-0.05	0.29	0.09	1.52	0.159
SCR.L	0.00112	0.00112	0.15	-0.02	0.32	0.09	1.87	0.084
SCR.R	0.00110	0.00111	0.18	0.01	0.34	0.09	2.20	0.042
SFO.L	0.00112	0.00111	0.00	-0.17	0.17	0.09	-0.02	1.000
SFO.R	0.00112	0.00112	0.05	-0.12	0.22	0.09	0.66	0.539
SLF.L	0.00113	0.00113	0.09	-0.08	0.26	0.09	1.14	0.290
SLF.R	0.00113	0.00113	0.15	-0.02	0.31	0.09	1.83	0.091
SS.L	0.00132	0.00132	0.07	-0.10	0.24	0.09	0.86	0.427
SS.R	0.00129	0.00129	0.09	-0.08	0.26	0.09	1.16	0.283
TAP.L	0.00149	0.00149	0.02	-0.15	0.19	0.09	0.26	0.809
TAP.R	0.00150	0.00150	0.04	-0.13	0.21	0.09	0.52	0.630
UNC.L	0.00123	0.00124	0.08	-0.09	0.25	0.09	0.97	0.372
UNC.R	0.00123	0.00124	0.19	0.02	0.36	0.09	2.41	0.025

**Supplementary Table 31.** Effect sizes for AD differences between healthy controls and the ‘R TLE-NL’ syndrome.

ROI	Mean AD controls	Mean AD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageAD	0.00132	0.00131	-0.13	-0.33	0.07	0.10	-1.31	0.216
BCC	0.00156	0.00156	-0.03	-0.23	0.17	0.10	-0.33	0.756
GCC	0.00149	0.00149	-0.02	-0.22	0.18	0.10	-0.22	0.834
SCC	0.00153	0.00152	-0.10	-0.30	0.10	0.10	-0.99	0.347
ACR.L	0.00114	0.00115	0.03	-0.17	0.23	0.10	0.33	0.754
ACR.R	0.00114	0.00115	0.09	-0.11	0.29	0.10	0.92	0.385
ALIC.L	0.00120	0.00120	0.00	-0.20	0.20	0.10	0.01	1.000
ALIC.R	0.00120	0.00121	0.03	-0.17	0.23	0.10	0.34	0.745
CGC.L	0.00131	0.00130	-0.13	-0.33	0.07	0.10	-1.33	0.207
CGC.R	0.00124	0.00123	-0.13	-0.33	0.07	0.10	-1.35	0.202
CGH.L	0.00132	0.00131	-0.07	-0.27	0.13	0.10	-0.68	0.519
CGH.R	0.00131	0.00132	0.06	-0.14	0.26	0.10	0.66	0.530
CST.L	0.00122	0.00123	0.06	-0.14	0.26	0.10	0.67	0.526
CST.R	0.00121	0.00121	-0.04	-0.24	0.16	0.10	-0.43	0.685
EC.L	0.00114	0.00115	0.17	-0.03	0.37	0.10	1.79	0.091
EC.R	0.00113	0.00115	0.27	0.07	0.47	0.10	2.83	0.008
FX.ST.L	0.00130	0.00130	0.05	-0.15	0.25	0.10	0.51	0.630
FX.ST.R	0.00129	0.00128	-0.05	-0.25	0.15	0.10	-0.54	0.611
PCR.L	0.00122	0.00123	0.08	-0.12	0.28	0.10	0.88	0.406
PCR.R	0.00123	0.00124	0.11	-0.09	0.31	0.10	1.12	0.290
PLIC.L	0.00131	0.00131	0.01	-0.19	0.21	0.10	0.14	0.895
PLIC.R	0.00130	0.00130	0.02	-0.18	0.22	0.10	0.22	0.833
PTR.L	0.00141	0.00142	0.07	-0.13	0.27	0.10	0.77	0.468
PTR.R	0.00140	0.00141	0.09	-0.11	0.29	0.10	0.96	0.363
RLIC.L	0.00135	0.00135	-0.03	-0.23	0.17	0.10	-0.27	0.800
RLIC.R	0.00131	0.00131	0.00	-0.20	0.20	0.10	-0.03	1.000
SCR.L	0.00112	0.00112	0.07	-0.13	0.27	0.10	0.75	0.478
SCR.R	0.00110	0.00110	-0.03	-0.23	0.17	0.10	-0.30	0.780
SFO.L	0.00112	0.00112	0.02	-0.18	0.22	0.10	0.20	0.847
SFO.R	0.00112	0.00113	0.15	-0.05	0.35	0.10	1.50	0.155
SLF.L	0.00113	0.00113	-0.02	-0.22	0.18	0.10	-0.16	0.877
SLF.R	0.00113	0.00113	0.06	-0.14	0.26	0.10	0.61	0.563
SS.L	0.00132	0.00132	-0.03	-0.23	0.17	0.10	-0.32	0.765
SS.R	0.00129	0.00130	0.22	0.02	0.42	0.10	2.23	0.035
TAP.L	0.00149	0.00151	0.17	-0.03	0.37	0.10	1.80	0.089
TAP.R	0.00150	0.00151	0.08	-0.12	0.28	0.10	0.83	0.429
UNC.L	0.00123	0.00124	0.02	-0.18	0.22	0.10	0.25	0.813
UNC.R	0.00123	0.00125	0.21	0.01	0.41	0.10	2.20	0.038

**Supplementary Table 32.** Effect sizes for AD differences between healthy controls and the ‘GGE’ syndrome.

ROI	Mean AD controls	Mean AD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageAD	0.00132	0.00131	-0.19	-0.39	0.00	0.10	-2.11	0.048
BCC	0.00156	0.00154	-0.20	-0.40	-0.01	0.10	-2.22	0.038
GCC	0.00149	0.00148	-0.09	-0.28	0.10	0.10	-0.96	0.369
SCC	0.00153	0.00154	0.06	-0.13	0.26	0.10	0.70	0.512
ACR.L	0.00114	0.00115	0.04	-0.15	0.23	0.10	0.41	0.699
ACR.R	0.00114	0.00115	0.07	-0.12	0.26	0.10	0.76	0.474
ALIC.L	0.00120	0.00118	-0.29	-0.48	-0.10	0.10	-3.15	0.003
ALIC.R	0.00120	0.00119	-0.23	-0.42	-0.03	0.10	-2.45	0.022
CGC.L	0.00131	0.00129	-0.22	-0.41	-0.03	0.10	-2.40	0.025
CGC.R	0.00124	0.00122	-0.21	-0.40	-0.02	0.10	-2.30	0.031
CGH.L	0.00132	0.00131	-0.14	-0.34	0.05	0.10	-1.56	0.142
CGH.R	0.00131	0.00129	-0.16	-0.35	0.03	0.10	-1.73	0.106
CST.L	0.00122	0.00122	-0.08	-0.28	0.11	0.10	-0.91	0.393
CST.R	0.00121	0.00120	-0.08	-0.27	0.11	0.10	-0.87	0.412
EC.L	0.00114	0.00114	-0.17	-0.36	0.03	0.10	-1.80	0.091
EC.R	0.00113	0.00113	-0.14	-0.34	0.05	0.10	-1.58	0.139
FX.ST.L	0.00130	0.00129	-0.16	-0.35	0.03	0.10	-1.77	0.098
FX.ST.R	0.00129	0.00128	-0.12	-0.32	0.07	0.10	-1.36	0.203
PCR.L	0.00122	0.00122	0.02	-0.18	0.21	0.10	0.17	0.870
PCR.R	0.00123	0.00124	0.04	-0.16	0.23	0.10	0.39	0.714
PLIC.L	0.00131	0.00130	-0.29	-0.48	-0.09	0.10	-3.10	0.004
PLIC.R	0.00130	0.00129	-0.27	-0.46	-0.08	0.10	-2.92	0.006
PTR.L	0.00141	0.00140	-0.12	-0.31	0.07	0.10	-1.31	0.219
PTR.R	0.00140	0.00139	-0.13	-0.32	0.06	0.10	-1.40	0.190
RLIC.L	0.00135	0.00133	-0.21	-0.40	-0.02	0.10	-2.25	0.035
RLIC.R	0.00131	0.00130	-0.14	-0.33	0.05	0.10	-1.54	0.149
SCR.L	0.00112	0.00111	-0.09	-0.29	0.10	0.10	-1.03	0.335
SCR.R	0.00110	0.00111	0.02	-0.17	0.21	0.10	0.19	0.861
SFO.L	0.00112	0.00111	-0.08	-0.27	0.12	0.10	-0.82	0.442
SFO.R	0.00112	0.00111	-0.03	-0.22	0.16	0.10	-0.29	0.786
SLF.L	0.00113	0.00113	-0.13	-0.32	0.07	0.10	-1.37	0.198
SLF.R	0.00113	0.00112	-0.08	-0.27	0.11	0.10	-0.84	0.428
SS.L	0.00132	0.00131	-0.14	-0.33	0.05	0.10	-1.55	0.145
SS.R	0.00129	0.00128	-0.09	-0.28	0.10	0.10	-1.00	0.346
TAP.L	0.00149	0.00149	0.05	-0.14	0.24	0.10	0.53	0.618
TAP.R	0.00150	0.00149	0.02	-0.17	0.21	0.10	0.19	0.860
UNC.L	0.00123	0.00124	0.01	-0.18	0.20	0.10	0.11	0.916
UNC.R	0.00123	0.00124	0.08	-0.11	0.27	0.10	0.88	0.408

**Supplementary Table 33.** Effect sizes for AD differences between healthy controls and the ‘ExE’ syndrome.

ROI	Mean AD controls	Mean AD patients	Cohen's d	95% CI lower	95% CI upper	Standard error	Z score	P value
AverageAD	0.00132	0.00132	-0.16	-0.32	0.00	0.08	-2.19	0.047
BCC	0.00156	0.00155	-0.12	-0.28	0.04	0.08	-1.61	0.142
GCC	0.00149	0.00149	-0.05	-0.21	0.11	0.08	-0.63	0.567
SCC	0.00153	0.00154	0.06	-0.10	0.22	0.08	0.85	0.440
ACR.L	0.00114	0.00115	0.03	-0.13	0.19	0.08	0.44	0.686
ACR.R	0.00114	0.00115	0.00	-0.16	0.16	0.08	-0.05	1.000
ALIC.L	0.00120	0.00119	-0.23	-0.39	-0.07	0.08	-3.13	0.004
ALIC.R	0.00120	0.00119	-0.23	-0.39	-0.07	0.08	-3.14	0.004
CGC.L	0.00131	0.00130	-0.16	-0.32	0.00	0.08	-2.18	0.047
CGC.R	0.00124	0.00123	-0.04	-0.20	0.12	0.08	-0.56	0.611
CGH.L	0.00132	0.00133	-0.03	-0.19	0.13	0.08	-0.35	0.751
CGH.R	0.00131	0.00131	-0.03	-0.19	0.13	0.08	-0.42	0.703
CST.L	0.00122	0.00123	0.00	-0.16	0.16	0.08	-0.01	1.000
CST.R	0.00121	0.00122	0.03	-0.12	0.19	0.08	0.47	0.671
EC.L	0.00114	0.00114	-0.11	-0.27	0.05	0.08	-1.45	0.186
EC.R	0.00113	0.00113	-0.04	-0.20	0.12	0.08	-0.48	0.664
FX.ST.L	0.00130	0.00130	-0.03	-0.19	0.13	0.08	-0.44	0.689
FX.ST.R	0.00129	0.00130	0.05	-0.11	0.21	0.08	0.73	0.505
PCR.L	0.00122	0.00123	0.14	-0.02	0.30	0.08	1.86	0.090
PCR.R	0.00123	0.00125	0.14	-0.02	0.30	0.08	1.89	0.086
PLIC.L	0.00131	0.00131	-0.10	-0.26	0.06	0.08	-1.29	0.239
PLIC.R	0.00130	0.00131	-0.06	-0.22	0.10	0.08	-0.77	0.484
PTR.L	0.00141	0.00141	0.00	-0.16	0.16	0.08	-0.02	1.000
PTR.R	0.00140	0.00140	-0.08	-0.24	0.08	0.08	-1.05	0.338
RLIC.L	0.00135	0.00135	0.01	-0.15	0.17	0.08	0.11	0.918
RLIC.R	0.00131	0.00132	0.06	-0.10	0.22	0.08	0.76	0.487
SCR.L	0.00112	0.00112	0.03	-0.13	0.19	0.08	0.36	0.742
SCR.R	0.00110	0.00111	0.09	-0.07	0.25	0.08	1.20	0.274
SFO.L	0.00112	0.00112	-0.02	-0.18	0.14	0.08	-0.24	0.825
SFO.R	0.00112	0.00111	-0.07	-0.23	0.09	0.08	-0.93	0.398
SLF.L	0.00113	0.00114	0.05	-0.11	0.21	0.08	0.68	0.535
SLF.R	0.00113	0.00113	0.10	-0.06	0.26	0.08	1.34	0.223
SS.L	0.00132	0.00133	0.06	-0.10	0.22	0.08	0.83	0.448
SS.R	0.00129	0.00129	-0.01	-0.17	0.15	0.08	-0.16	0.885
TAP.L	0.00149	0.00149	0.04	-0.12	0.20	0.08	0.53	0.632
TAP.R	0.00150	0.00150	0.02	-0.14	0.18	0.08	0.28	0.800
UNC.L	0.00123	0.00123	-0.07	-0.23	0.09	0.08	-0.99	0.365
UNC.R	0.00123	0.00122	-0.04	-0.20	0.12	0.08	-0.57	0.602

**Supplementary Table 34. Relationship between FA and age of disease onset by syndrome.** Partial correlations between FA in each ROI and age of disease onset controlling for age, age<sup>2</sup> and sex. Results are split by syndrome: all syndromes (All), temporal lobe epilepsy with hippocampal sclerosis in the left and right hemisphere (TLE-HS-l and TLE-HS-r respectively), non-lesional temporal lobe epilepsy in the left and right hemisphere (TLE-NL-l and TLE-NL-r respectively), genetic generalized epilepsy (GGE) and extra temporal (ExE). ROIs are separated by left (.L) and right (.R) hemisphere where indicated. Significance was set at \*\*\*  $p = < 0.001$  (controlling for multiple comparisons, one sided). \*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p = < 0.001$ .

ROI	All	TLE-HS-l	TLE-HS-r	TLE-NL-l	TLE-NL-r	GGE	ExE
AverageFA	.19***	.20***	.24***	.08	.14	.08	.02
BCC	.15***	.19***	.24***	.08	.00	-.05	.03
GCC	.16***	.20***	.19**	.06	.09	-.06	.05
SCC	.13***	.11*	.28***	.02	-.09	.00	.11
ACR.L	.13***	.18**	.16**	.03	.07	-.03	.02
ACR.R	.11***	.12*	.07	.13	.15	-.02	.00
ALIC.L	.09**	.08	.12*	.02	.16	-.04	-.03
ALIC.R	.11***	.15**	.10	.12	.11	.02	-.01
CGC.L	.16***	.17**	.15*	.17*	.08	.01	.01
CGC.R	.16***	.17**	.19**	.14*	.11	.09	-.01
CGH.L	.11***	.08	.22***	-.03	-.12	.11	.06
CGH.R	.12***	-.03	.27***	.09	.12	.11	-.01
CST.L	.06*	.07	.07	.07	.04	.11	-.01
CST.R	.03	.03	-.01	.01	.09	.03	-.01
EC.L	.16***	.20***	.19**	.08	.13	.08	-.05
EC.R	.17***	.17**	.25***	.07	.15	.16*	.00
FX.ST.L	.11***	.12*	.13*	.09	.02	.00	.01
FX.ST.R	.13***	.14**	.19**	.09	.06	.07	-.03
PCR.L	.09**	.10*	.15*	.05	-.11	.07	.02
PCR.R	.13***	.11*	.22***	.06	-.08	.05	.07
PLIC.L	.03	.03	.04	-.01	-.03	-.05	.06
PLIC.R	.05	.05	.06	-.01	-.07	.07	.05
PTR.L	.11***	.16**	.13*	.11	-.02	.03	.02
PTR.R	.10***	.12*	.14*	.11	-.04	.01	.00
RLIC.L	.10***	.14*	.09	.05	-.02	.04	.08
RLIC.R	.07*	.05	.10	.00	.03	.05	-.03
SCR.L	.07**	.11*	.08	-.02	.02	-.03	.07
SCR.R	.09***	.14*	.08	-.01	-.03	.02	.10
SFO.L	.09**	.12*	.03	.138*	.08	-.01	-.03
SFO.R	.11***	.15**	.08	.08	.08	.08	.02
SLF.L	.13***	.13*	.16**	.155*	-.01	.01	.05
SLF.R	.14***	.07	.23***	.16*	.04	.11	.05
SS.L	.12***	.16**	.15*	.06	.00	.02	.08
SS.R	.12***	.12*	.17**	.13	-.01	.07	.02
TAP.L	.13***	.11*	.18**	.09	.07	-.06	.08
TAP.R	.13***	.09	.19**	.02	.10	.00	.06
UNC.L	.08**	.13*	.09	-.07	.09	.11	-.06
UNC.R	.15***	.05	.27***	.05	.30***	.09	.00

**Supplementary Table 35. Relationship between FA and disease duration by syndrome.**

Partial correlations between FA in each ROI and disease duration controlling for age, age<sup>2</sup> and sex. Results are split by syndrome: all syndromes (All), temporal lobe epilepsy with hippocampal sclerosis in the left and right hemisphere (TLE-HS-l and TLE-HS-r respectively), non-lesional temporal lobe epilepsy in the left and right hemisphere (TLE-NL-l and TLE-NL-r respectively), genetic generalized epilepsy (GGE) and extra temporal (Extra). ROIs are separated by left (.L) and right (.R) hemisphere where indicated. Significance was set at \*\*\*  $p = < 0.001$  (controlling for multiple comparisons, one sided). \*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p = < 0.001$ .

ROI	All	TLE-HS-l	TLE-HS-r	TLE-NL-l	TLE-NL-r	GGE	ExE
AverageFA	-.17***	-.17**	-.21***	-.09	-.23*	-.09	-.02
BCC	-.16***	-.21***	-.20**	-.15*	-.13	.04	-.03
GCC	-.13***	-.16**	-.18**	-.06	-.15	.02	-.05
SCC	-.10***	-.06	-.22***	-.01	.01	-.01	-.11
ACR.L	-.11***	-.14*	-.13*	-.06	-.16	.00	-.01
ACR.R	-.10***	-.09	-.05	-.15*	-.25**	-.01	.02
ALIC.L	-.08**	-.08	-.09	-.04	-.23*	.06	.04
ALIC.R	-.09**	-.10	-.09	-.14*	-.19*	-.02	.06
CGC.L	-.17**	-.20***	-.11	-.22**	-.16	.01	-.02
CGC.R	-.17***	-.20***	-.14*	-.19*	-.21*	-.06	.00
CGH.L	-.09**	-.03	-.13*	-.01	.05	-.10	-.03
CGH.R	-.10**	.06	-.28***	-.07	-.08	-.09	.03
CST.L	-.05	-.02	-.12*	-.05	-.13	-.11	.04
CST.R	-.01	-.03	.01	.04	-.12	-.04	.08
ECL	-.16**	-.22***	-.13*	-.10	-.17	-.07	.05
EC.R	-.16**	-.15**	-.22***	-.10	-.19*	-.17*	-.01
FX.ST.L	-.09**	-.11*	-.02	-.12	-.05	-.01	-.03
FX.ST.R	-.13**	-.15**	-.12*	-.11	-.09	-.07	-.01
PCR.L	-.06*	-.04	-.11	.01	.03	-.07	-.02
PCR.R	-.10***	-.03	-.26***	.00	.01	-.09	-.07
PLIC.L	-.03	-.02	-.06	.01	-.06	.07	-.05
PLIC.R	-.04	-.02	-.06	-.03	.01	-.07	-.01
PTR.L	-.09**	-.12*	-.14*	-.07	-.06	-.07	-.03
PTR.R	-.08**	-.09	-.14*	-.06	-.05	-.07	-.02
RLIC.L	-.08**	-.13*	-.04	-.10	-.05	-.04	-.04
RLIC.R	-.05*	-.03	-.09	-.03	-.10	-.05	.07
SCR.L	-.06*	-.09	-.09	.04	-.06	.03	-.02
SCR.R	-.09**	-.10*	-.15*	.00	.02	-.03	-.06
SFO.L	-.06*	-.10	.02	-.11	-.08	.02	.01
SFO.R	-.09**	-.12*	-.09	-.12	-.04	-.09	.02
SLF.L	-.13***	-.12*	-.12*	-.14	-.07	.00	-.07
SLF.R	-.12***	-.05	-.20**	-.14*	-.07	-.10	-.05
SS.L	-.12***	-.15**	-.09	-.07	-.16	-.03	-.09
SS.R	-.11***	-.07	-.18**	-.13	-.09	-.09	-.01
TAP.L	-.14***	-.08	-.26***	-.05	-.16	.05	-.10
TAP.R	-.13***	-.03	-.26***	-.02	-.12	-.03	-.08
UNC.L	-.07**	-.15**	-.02	.10	-.07	-.12	.03
UNC.R	-.14**	-.05	-.24***	-.01	-.37***	-.09	-.05

**Supplementary Table 36. Relationship between MD and age of disease onset by syndrome.** Partial correlations between MD in each ROI and age of disease onset controlling for age, age<sup>2</sup> and sex. Results are split by syndrome: all syndromes (All), temporal lobe epilepsy with hippocampal sclerosis in the left and right hemisphere (TLE-HS-l and TLE-HS-r respectively), non-lesional temporal lobe epilepsy in the left and right hemisphere (TLE-NL-l and TLE-NL-r respectively), genetic generalized epilepsy (GGE) and extra temporal (Extra). ROIs are separated by left (.L) and right (.R) hemisphere where indicated. Significance was set at \*\*\*  $p = < 0.001$  (controlling for multiple comparisons, one sided). \*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p = < 0.001$ .

ROI	All	TLE-HS-l	TLE-HS-r	TLE-NL-l	TLE-NL-r	GGE	ExE
<b>AverageMD</b>	-.16***	-.11*	-.27***	-.14*	-.09	-.02	.00
<b>BCC</b>	-.13***	-.08	-.20**	-.06	-.10	.03	-.02
<b>GCC</b>	-.10***	-.12*	-.10	-.02	-.05	.06	-.03
<b>SCC</b>	-.11***	-.08	-.21***	-.02	-.08	-.10	.04
<b>ACR.L</b>	-.10***	-.14**	-.11*	.02	-.05	.03	-.05
<b>ACR.R</b>	-.10**	-.05	-.11	-.03	-.06	.05	-.09
<b>ALIC.L</b>	-.07*	-.08	-.04	-.04	.06	.04	-.08
<b>ALIC.R</b>	-.08**	-.09	-.05	-.04	.14	.02	-.13
<b>CGC.L</b>	-.11***	-.11*	-.07	-.10	-.04	-.10	-.06
<b>CGC.R</b>	-.10***	.00	-.11	-.15*	-.04	-.10	-.12
<b>CGH.L</b>	-.08**	-.10	-.15*	-.02	.14	.03	-.05
<b>CGH.R</b>	-.10***	-.01	-.23***	-.05	.02	-.05	-.01
<b>CST.L</b>	-.03	-.05	-.13*	-.01	.14	.04	.02
<b>CST.R</b>	-.01	.01	-.13*	.08	.13	.02	.03
<b>ECL</b>	-.09***	-.06	-.11	-.04	.01	-.06	-.03
<b>EC.R</b>	-.10***	-.08	-.14*	-.01	.06	-.05	-.12
<b>FX.ST.L</b>	-.08**	-.04	-.15*	-.13	.00	.04	-.02
<b>FX.ST.R</b>	-.11***	.00	-.20***	-.12	-.01	.05	-.08
<b>PCR.L</b>	-.08**	-.02	-.15*	.03	-.06	-.05	-.02
<b>PCR.R</b>	-.09**	-.04	-.17**	.02	-.07	-.04	-.01
<b>PLIC.L</b>	-.03	.02	-.03	-.08	.05	.12	-.18*
<b>PLIC.R</b>	-.05	.01	-.06	-.09	.13	.03	-.12
<b>PTR.L</b>	-.08**	-.05	-.19**	.04	.02	.01	-.06
<b>PTR.R</b>	-.07*	-.04	-.13*	.05	-.03	.00	-.01
<b>RLIC.L</b>	-.10***	-.08	-.10	-.06	-.07	-.07	-.11
<b>RLIC.R</b>	-.09**	.02	-.19**	.00	-.06	-.02	-.09
<b>SCR.L</b>	-.065*	-.05	-.13*	.06	-.02	.07	-.08
<b>SCR.R</b>	-.064*	-.05	-.08	.03	.09	.06	-.12
<b>SFO.L</b>	-.04	.00	-.06	-.02	.05	.15	-.07
<b>SFO.R</b>	-.06*	.02	-.10	-.01	.00	.08	-.14*
<b>SLF.L</b>	-.07**	-.06	-.11	.01	.07	-.04	-.05
<b>SLF.R</b>	-.07*	-.05	-.10	-.04	.12	-.01	-.06
<b>SS.L</b>	-.10***	-.14**	-.15*	.05	.10	-.01	-.07
<b>SS.R</b>	-.10***	-.02	-.22***	.06	-.02	-.01	-.04
<b>TAP.L</b>	-.12***	-.15**	-.22***	.02	-.10	-.03	.05
<b>TAP.R</b>	-.10***	-.05	-.16**	-.16*	-.17*	-.01	.08
<b>UNC.L</b>	-.06*	-.11*	-.04	.06	.07	-.23**	.06
<b>UNC.R</b>	-.09**	.01	-.20***	.07	-.02	-.01	-.09

**Supplementary Table 37. Relationship between MD and disease duration by syndrome.**  
 Partial correlations between MD in each ROI and disease duration controlling for age, age<sup>2</sup> and sex. Results are split by syndrome: all syndromes (All), temporal lobe epilepsy with hippocampal sclerosis in the left and right hemisphere (TLE-HS-l and TLE-HS-r respectively), non-lesional temporal lobe epilepsy in the left and right hemisphere (TLE-NL-l and TLE-NL-r respectively), genetic generalized epilepsy (GGE) and extra temporal (Extra). ROIs are separated by left (.L) and right (.R) hemisphere where indicated. Significance was set at \*\*\*  $p = < 0.001$  (controlling for multiple comparisons, one sided). \*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p = < 0.001$ .

ROI	All	TLE-HS-l	TLE-HS-r	TLE-NL-l	TLE-NL-r	GGE	ExE
<b>AverageMD</b>	.16***	.12*	.26***	.14*	.05	.00	.05
BCC	.13***	.09	.18**	.11	.06	-.04	.04
GCC	.11***	.16**	.12*	-.04	.00	-.07	.07
SCC	.09**	.05	.21***	.02	-.04	.09	-.02
<b>ACR.L</b>	.11***	.15**	.17**	-.07	.02	-.05	.06
<b>ACR.R</b>	.10***	.06	.16*	-.03	.03	-.07	.09
<b>ALIC.L</b>	.03	.03	-.03	.02	-.13	-.06	.12
<b>ALIC.R</b>	.04	.05	-.01	-.01	-.18*	-.04	.16*
<b>CGC.L</b>	.08**	.06	.06	.03	.06	.08	.07
<b>CGC.R</b>	.09**	-.01	.13*	.09	.03	.08	.15*
<b>CGH.L</b>	.06*	.03	.14*	-.02	-.10	-.03	.06
<b>CGH.R</b>	.09**	-.03	.26***	.04	.06	.05	.02
<b>CST.L</b>	.00	-.02	.14*	.01	-.18*	-.03	.01
<b>CST.R</b>	-.02	-.03	.10	-.10	-.21*	-.01	.00
<b>ECL</b>	.08**	.07	.08	-.03	-.01	.03	.08
<b>EC.R</b>	.09**	.03	.15*	-.01	.00	.03	.17*
<b>FX.ST.L</b>	.05*	.03	.12*	.06	-.03	-.07	-.02
<b>FX.ST.R</b>	.10***	-.02	.18**	.05	.12	-.07	.11
<b>PCR.L</b>	.08**	.04	.16**	-.06	-.03	.04	.04
<b>PCR.R</b>	.09**	.03	.17**	.03	-.04	.02	.02
<b>PLIC.L</b>	.00	-.06	-.03	.05	-.06	-.14	.19**
<b>PLIC.R</b>	.04	-.02	.01	.13	-.11	-.07	.14*
<b>PTR.L</b>	.09**	.07	.21***	-.04	-.10	-.01	.07
<b>PTR.R</b>	.06*	.04	.13*	-.05	-.02	.00	-.01
<b>RLIC.L</b>	.09**	.06	.12*	.05	.07	.06	.14*
<b>RLIC.R</b>	.09**	-.01	.17**	-.01	.06	.01	.13
<b>SCR.L</b>	.06*	.03	.13*	-.07	.02	-.09	.08
<b>SCR.R</b>	.05*	.03	.09	-.09	-.05	-.07	.12
<b>SFO.L</b>	.03	.03	.03	-.05	.00	-.16*	.08
<b>SFO.R</b>	.070*	.03	.11	-.04	.00	-.09	.13
<b>SLF.L</b>	.07**	.03	.11	-.02	.03	.02	.09
<b>SLF.R</b>	.06*	.02	.10	.02	-.07	-.01	.10
<b>SS.L</b>	.11***	.18**	.139*	-.10	-.03	.00	.11
<b>SS.R</b>	.11***	.03	.24***	-.12	.07	.01	.07
<b>TAP.L</b>	.13***	.14*	.29***	-.04	-.05	.03	.02
<b>TAP.R</b>	.09**	.05	.20**	.09	-.02	.00	-.05
<b>UNC.L</b>	.05	.10	.03	-.12	-.05	.23**	-.06
<b>UNC.R</b>	.08**	.03	.12*	-.12	.13	-.01	.12

**Supplementary Table 38. Relationship between RD and age of disease onset by syndrome.** Partial correlations between RD in each ROI and age of disease onset controlling for age, age<sup>2</sup> and sex. Results are split by syndrome: all syndromes (All), temporal lobe epilepsy with hippocampal sclerosis in the left and right hemisphere (TLE-HS-l and TLE-HS-r respectively), non-lesional temporal lobe epilepsy in the left and right hemisphere (TLE-NL-l and TLE-NL-r respectively), genetic generalized epilepsy (GGE) and extra temporal (Extra). ROIs are separated by left (.L) and right (.R) hemisphere where indicated. Significance was set at \*\*\*  $p = < 0.001$  (controlling for multiple comparisons, one sided). \*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p = < 0.001$ .

ROI	All	TLE-HS-l	TLE-HS-r	TLE-NL-l	TLE-NL-r	GGE	ExE
<b>AverageRD</b>	-.18***	-.15**	-.25***	-.14*	-.18*	-.05	-.02
<b>BCC</b>	-.17***	-.12*	-.24***	-.15*	-.19*	.03	-.03
<b>GCC</b>	-.13***	-.16***	-.14*	-.05	-.11	.01	-.03
<b>SCC</b>	-.14***	-.08	-.27***	-.02	-.16	-.06	-.08
<b>ACR.L</b>	-.13***	-.17***	-.12*	.00	-.14	.00	-.05
<b>ACR.R</b>	-.11***	-.07	-.09	-.06	-.16*	.01	-.07
<b>ALIC.L</b>	-.09***	-.09	-.11*	-.04	-.03	.07	-.06
<b>ALIC.R</b>	-.12***	-.08	-.10	-.11	-.08	-.03	-.11
<b>CGC.L</b>	-.14***	-.14**	-.11*	-.10	-.06	-.05	-.04
<b>CGC.R</b>	-.13***	-.04	-.14*	-.14*	-.11	-.12	-.05
<b>CGH.L</b>	-.13***	-.14**	-.18**	-.06	.09	-.03	-.07
<b>CGH.R</b>	-.12***	-.02	-.24***	-.13	-.05	-.09	.00
<b>CST.L</b>	-.05*	-.12*	-.10	-.04	.08	.01	-.01
<b>CST.R</b>	-.04	-.05	-.08	-.04	.06	.03	-.02
<b>EC.L</b>	-.14***	-.14**	-.15*	-.08	-.08	-.09	-.01
<b>EC.R</b>	-.14***	-.12*	-.20**	-.06	-.06	-.10	-.08
<b>FX.ST.L</b>	-.12***	-.10*	-.11*	-.21**	-.01	.01	-.02
<b>FX.ST.R</b>	-.13***	-.07	-.18**	-.17*	-.08	-.05	-.03
<b>PCR.L</b>	-.10	-.02	-.16**	-.03	-.08	-.10	-.03
<b>PCR.R</b>	-.11***	-.08	-.19**	.02	-.07	-.07	-.05
<b>PLIC.L</b>	-.05	.03	-.09	-.06	-.02	.07	-.13
<b>PLIC.R</b>	-.08**	-.01	-.10	-.11	.01	-.04	-.07
<b>PTR.L</b>	-.12***	-.10*	-.20**	-.03	-.11	-.05	-.06
<b>PTR.R</b>	-.11***	-.10	-.15*	.03	-.14	-.03	-.02
<b>RLIC.L</b>	-.13***	-.10*	-.14*	-.10	-.12	-.08	-.14*
<b>RLIC.R</b>	-.11***	-.02	-.17**	-.04	-.09	-.04	-.06
<b>SCR.L</b>	-.07*	-.06	-.10	.05	-.09	.06	-.10
<b>SCR.R</b>	-.08**	-.07	-.07	.03	.05	.01	-.15*
<b>SFO.L</b>	-.09**	-.07	-.11	.00	-.07	.12	-.04
<b>SFO.R</b>	-.11***	-.04	-.15*	-.07	.02	.01	-.10
<b>SLF.L</b>	-.11***	-.08	-.15*	-.03	.05	-.05	-.05
<b>SLF.R</b>	-.10***	-.03	-.14*	-.04	.02	-.08	-.07
<b>SS.L</b>	-.14***	-.17**	-.17**	-.01	-.05	-.05	-.10
<b>SS.R</b>	-.12***	-.08	-.21***	.05	-.16	-.06	-.02
<b>TAP.L</b>	-.14***	-.11*	-.24***	.03	-.16*	-.03	-.01
<b>TAP.R</b>	-.13***	-.07	-.19**	-.14*	-.21*	-.04	.03
<b>UNC.L</b>	-.07*	-.09	-.05	.04	.03	-.23**	.07
<b>UNC.R</b>	-.12***	-.05	-.21***	.02	-.15	-.02	-.05

**Supplementary Table 39. Relationship between RD and disease duration by syndrome.**  
 Partial correlations between RD in each ROI and disease duration controlling for age, age<sup>2</sup> and sex. Results are split by syndrome: all syndromes (All), temporal lobe epilepsy with hippocampal sclerosis in the left and right hemisphere (TLE-HS-l and TLE-HS-r respectively), non-lesional temporal lobe epilepsy in the left and right hemisphere (TLE-NL-l and TLE-NL-r respectively), genetic generalized epilepsy (GGE) and extra temporal (Extra). ROIs are separated by left (.L) and right (.R) hemisphere where indicated. Significance was set at \*\*\*  $p = < 0.001$  (controlling for multiple comparisons, one sided). \*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p = < 0.001$ .

ROI	All	TLE-HS-l	TLE-HS-r	TLE-NL-l	TLE-NL-r	GGE	ExE
<b>AverageRD</b>	.19***	.17**	.27***	.15*	.16	.04	.05
BCC	.18***	.14*	.24***	.21**	.15	-.04	.04
GCC	.15***	.21**	.18**	.00	.08	-.02	.04
SCC	.15***	.09	.29***	.04	.05	.05	.11
<b>ACR.L</b>	.14***	.19**	.18**	-.03	.11	-.01	.06
<b>ACR.R</b>	.11***	.09	.13*	.01	.16	-.03	.06
<b>ALIC.L</b>	.07*	.07	.05	-.01	.06	-.09	.09
<b>ALIC.R</b>	.09**	.08	.08	.04	.07	.01	.11
<b>CGC.L</b>	.14***	.15**	.12*	.04	.10	.03	.06
<b>CGC.R</b>	.14***	.04	.18**	.10	.11	.10	.07
<b>CGH.L</b>	.11***	.08	.18**	.02	-.06	.03	.08
<b>CGH.R</b>	.12***	-.02	.28***	.10	.13	.09	.02
<b>CST.L</b>	.03	.09	.13*	.00	-.14	-.01	.01
<b>CST.R</b>	.01	.04	.08	.00	-.16	-.02	.01
<b>EC.L</b>	.14***	.14*	.15*	.04	.11	.07	.04
<b>EC.R</b>	.14***	.09	.21***	.04	.10	.09	.12
<b>FX.ST.L</b>	.10***	.10	.11	.15*	.01	-.01	.02
<b>FX.ST.R</b>	.14***	.07	.17**	.12	.15	.03	.07
<b>PCR.L</b>	.10**	.03	.20**	-.02	-.01	.09	.05
<b>PCR.R</b>	.11***	.07	.21***	-.01	-.03	.05	.06
<b>PLIC.L</b>	.02	-.04	.07	-.05	-.01	-.08	.15*
<b>PLIC.R</b>	.06*	.01	.09	.09	-.06	.02	.06
<b>PTR.L</b>	.13***	.12*	.24***	.02	.02	.05	.07
<b>PTR.R</b>	.11***	.11*	.18**	-.06	.12	.03	.01
<b>RLIC.L</b>	.10***	.06	.16*	.02	.05	.07	.13
<b>RLIC.R</b>	.11***	.04	.17**	.02	.08	.03	.06
<b>SCR.L</b>	.07*	.06	.13*	-.08	.08	-.08	.07
<b>SCR.R</b>	.08**	.07	.08	-.08	-.03	-.02	.13
<b>SFO.L</b>	.07*	.05	.07	-.03	.06	-.13	.05
<b>SFO.R</b>	.10***	.06	.11	.06	.04	-.02	.07
<b>SLF.L</b>	.12***	.08	.17**	.04	.05	.04	.09
<b>SLF.R</b>	.10***	.00	.16*	.04	.03	.07	.09
<b>SS.L</b>	.15***	.19***	.17**	-.03	.13	.05	.12
<b>SS.R</b>	.14***	.12*	.22***	-.06	.22*	.05	.04
<b>TAP.L</b>	.14***	.12*	.32***	-.11	.03	.04	.08
<b>TAP.R</b>	.13***	.07	.25***	.07	.08	.04	.01
<b>UNC.L</b>	.07*	.12*	.05	-.11	-.02	.24**	-.06
<b>UNC.R</b>	.11***	.00	.20**	-.06	.25**	.01	.09

**Supplementary Table 40. Relationship between AD and age of disease onset by syndrome.** Partial correlations between AD in each ROI and age of disease onset controlling for age, age<sup>2</sup> and sex. Results are split by syndrome: all syndromes (All), temporal lobe epilepsy with hippocampal sclerosis in the left and right hemisphere (TLE-HS-l and TLE-HS-r respectively), non-lesional temporal lobe epilepsy in the left and right hemisphere (TLE-NL-l and TLE-NL-r respectively), genetic generalized epilepsy (GGE) and extra temporal (Extra). ROIs are separated by left (.L) and right (.R) hemisphere where indicated. Significance was set at \*\*\*  $p = < 0.001$  (controlling for multiple comparisons, one sided). \*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p = < 0.001$ .

ROI	All	TLE-HS-l	TLE-HS-r	TLE-NL-l	TLE-NL-r	GGE	ExE
<b>AverageAD</b>	-.05*	-.03	-.16**	-.01	.09	.05	.03
<b>BCC</b>	-.01	.01	.00	-.03	-.02	.01	.02
<b>GCC</b>	-.02	-.05	.04	-.03	.06	.08	.00
<b>SCC</b>	-.06*	-.08	-.11	.02	-.07	-.08	.17*
<b>ACR.L</b>	-.02	-.04	-.01	.04	.10	.06	-.02
<b>ACR.R</b>	-.04	-.02	-.08	.04	.11	.09	-.10
<b>ALIC.L</b>	-.02	-.04	.01	.00	.11	-.04	-.07
<b>ALIC.R</b>	-.01	-.04	.04	.05	.22*	.01	-.13
<b>CGC.L</b>	.05	.03	.02	.04	.16	-.10	-.01
<b>CGC.R</b>	.05	.12*	.03	.00	.16	-.04	-.10
<b>CGH.L</b>	.00	-.02	-.04	.04	.14	.09	.00
<b>CGH.R</b>	-.02	-.01	-.13*	.03	.19*	.02	-.02
<b>CST.L</b>	.02	.03	-.10	.05	.15	.02	.04
<b>CST.R</b>	.04	.11*	-.09	.12	.17*	-.01	.07
<b>EC.L</b>	.01	.01	.02	.02	.19*	.02	-.05
<b>EC.R</b>	.03	.05	.06	.03	.26**	.05	-.14*
<b>FX.ST.L</b>	-.03	.00	-.09	-.10	.05	.05	-.01
<b>FX.ST.R</b>	-.02	.13*	-.12*	-.02	.04	.12	-.12
<b>PCR.L</b>	-.04	-.04	-.05	.04	-.12	.02	.02
<b>PCR.R</b>	-.02	.01	-.04	-.04	-.06	.01	.06
<b>PLIC.L</b>	.00	-.03	.05	-.08	.05	.14	-.09
<b>PLIC.R</b>	-.01	.00	.02	-.07	.02	.10	-.04
<b>PTR.L</b>	.00	.01	-.12*	.13	.12	.09	-.02
<b>PTR.R</b>	.02	.05	-.05	.08	.08	.05	.02
<b>RLIC.L</b>	-.03	-.04	-.01	-.06	-.02	-.01	.00
<b>RLIC.R</b>	-.04	.06	-.11*	-.09	.02	.02	-.11
<b>SCR.L</b>	-.01	-.03	-.03	.02	.09	.10	-.01
<b>SCR.R</b>	-.02	.01	-.04	-.04	.07	.13	-.03
<b>SFO.L</b>	.01	.03	-.01	.01	.09	.14	-.08
<b>SFO.R</b>	.01	.05	-.02	.04	.17*	.13	-.12
<b>SLF.L</b>	.02	-.01	.03	.06	.16	.00	-.02
<b>SLF.R</b>	.06*	.00	.09	.03	.24**	.13	-.02
<b>SS.L</b>	-.03	-.10*	-.05	.10	.15	.04	.00
<b>SS.R</b>	-.05	.02	-.17**	-.01	.08	.07	-.06
<b>TAP.L</b>	-.04	-.08	-.15*	.02	.02	-.04	.16*
<b>TAP.R</b>	-.01	.01	-.05	-.11	-.06	.01	.14*
<b>UNC.L</b>	.00	-.06	.04	.08	.11	-.09	.00
<b>UNC.R</b>	.00	.00	-.05	.12	.21*	.09	-.07

**Supplementary Table 41. Relationship between AD and disease duration by syndrome.**

Partial correlations between AD in each ROI and disease duration controlling for age, age<sup>2</sup> and sex. Results are split by syndrome: all syndromes (All), temporal lobe epilepsy with hippocampal sclerosis in the left and right hemisphere (TLE-HS-l and TLE-HS-r respectively), non-lesional temporal lobe epilepsy in the left and right hemisphere (TLE-NL-l and TLE-NL-r respectively), genetic generalized epilepsy (GGE) and extra temporal (Extra). ROIs are separated by left (.L) and right (.R) hemisphere where indicated. Significance was set at \*\*\*  $p = < 0.001$  (controlling for multiple comparisons, one sided). \*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p = < 0.001$ .

ROI	All	TLE-HS-l	TLE-HS-r	TLE-NL-l	TLE-NL-r	GGE	ExE
<b>AverageAD</b>	.03	-.02	.12*	-.04	-.13	-.06	.02
<b>BCC</b>	-.01	-.04	-.04	-.01	-.06	-.01	.01
<b>GCC</b>	.02	.06	-.03	-.06	-.16	-.09	.06
<b>SCC</b>	.05	.03	.09	-.03	.00	.08	-.08
<b>ACR.L</b>	.03	.04	.06	-.08	-.08	-.07	.03
<b>ACR.R</b>	.04	.02	.11	-.09	-.16	-.10	.12
<b>ALIC.L</b>	-.01	.01	-.10	-.01	-.12	.03	.11
<b>ALIC.R</b>	-.02	.02	-.13*	-.08	-.22*	-.03	.19*
<b>CGC.L</b>	-.06*	-.07	-.05	-.04	-.07	.09	.02
<b>CGC.R</b>	-.04	-.10	-.03	.01	-.14	.03	.14*
<b>CGH.L</b>	-.03	-.05	.02	-.06	-.10	-.10	.01
<b>CGH.R</b>	.00	-.04	.11	-.04	-.10	-.03	.02
<b>CST.L</b>	-.02	-.08	.14*	-.04	-.19*	-.01	.00
<b>CST.R</b>	-.04	-.09	.07	-.13	-.22*	.01	.02
<b>ECL</b>	-.01	-.02	-.05	-.01	-.14	-.04	.10
<b>EC.R</b>	-.03	-.08	-.07	-.04	-.18*	-.07	.19**
<b>FX.ST.L</b>	.01	-.04	.09	.08	-.07	-.07	-.04
<b>FX.ST.R</b>	.01	-.13*	.10	-.02	.01	-.14	.09
<b>PCR.L</b>	.05	.05	.10	-.06	-.04	-.03	.00
<b>PCR.R</b>	.03	.00	.06	.08	-.02	-.03	-.05
<b>PLIC.L</b>	.00	.01	-.09	.13	-.04	-.14	.10
<b>PLIC.R</b>	.01	.02	-.07	.08	-.01	-.12	.07
<b>PTR.L</b>	.00	-.02	.09	-.11	-.20*	-.08	.04
<b>PTR.R</b>	-.03	-.06	.04	-.08	-.16	-.05	-.04
<b>RLIC.L</b>	.04	.01	.02	.09	.04	.02	.05
<b>RLIC.R</b>	.04	-.08	.10	.11	-.03	-.02	.16*
<b>SCR.L</b>	.00	-.01	.01	.02	-.11	-.10	.04
<b>SCR.R</b>	.01	-.01	.02	.02	-.03	-.14	.06
<b>SFO.L</b>	-.04	-.07	-.05	-.07	-.01	-.14	.08
<b>SFO.R</b>	-.03	-.04	-.05	-.12	-.12	-.13	.16*
<b>SLF.L</b>	-.02	-.01	-.02	-.05	-.06	-.01	.04
<b>SLF.R</b>	-.06*	-.03	-.08	-.05	-.17	-.15	.06
<b>SS.L</b>	.03	.08	.04	-.09	-.08	-.05	.05
<b>SS.R</b>	.04	-.02	.14*	-.09	-.06	-.08	.11
<b>TAP.L</b>	.05	.09	.19**	-.05	-.11	.04	-.11
<b>TAP.R</b>	-.02	-.03	.05	.05	-.16	-.02	-.14*
<b>UNC.L</b>	-.01	.03	-.06	-.12	-.05	.08	-.01
<b>UNC.R</b>	-.02	-.06	.02	-.08	-.13	-.10	.06