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Corrigendum

Corrigendum to "Diffusion tensor image segmentation of the cerebrum provides a single measure of cerebral small vessel disease severity related to cognitive change" [Neuroimage: Clinical 16 (2017) 330–342]

Owen A. Williams[a,*], Eva A. Zeestraten[a], Philip Benjamin[b], Christian Lambert[a], Andrew J. Lawrence[c], Andrew D. Mackinnon[d], Robin G. Morris[e], Hugh S. Markus[c], Rebecca A. Charlton[f], Thomas R. Barrick[a]

[a] Neuroscience Research Centre, Molecular and Clinical Sciences Research Institute, St George's University of London, London, UK
[b] Department of Radiology, Charing Cross Hospital Campus, Imperial College NHS Trust, London, UK
[c] Stroke Research Group, Clinical Neurosciences, University of Cambridge, Cambridge, UK
[d] Atkinson Morley Regional Neuroscience Centre, St George's NHS Healthcare Trust, London, UK
[e] Department of Psychology, King's College Institute of Psychiatry, Psychology, and Neuroscience, London, UK
[f] Department of Psychology, Goldsmiths University of London, London, UK

The authors regret that due to a data coding error, cross-sectional effects from linear mixed effects models were stored, presented and interpreted as longitudinal effects (i.e. interactions with the time variable). As a result, the results presented in Tables 5 and 6 do not represent the associations between change in MRI markers and change in executive function (EF) and information processing speed (IPS) but show the baseline associations. The true longitudinal associations are provided in the corrected Tables 5 and 6.

The primary difference in the results is that while change in DSEG θ is significantly associated with change in EF and IPS in univariable

Table 5
Univariable and multivariate linear mixed effect models of executive function change related to change in magnetic resonance imaging biomarkers.

EF	Univariable models		Multivariable Models	
	Beta (S.E.)	χ^2, p	Beta (S.E.)	X^2, p
DSEG θ	**−0.0051 (0.0025)**	**4.32, 0.039**	−0.0034 (0.0024)	2.01, 0.160
MD NPH	6.9 (7.4)	0.85, 0.360	[a]	[a]
MD Med ($mm^2 s^{-1}$)	−540 (510)	1.12, 0.290	[a]	[a]
FA NPH	−150 (84)	3.02, 0.083	[a]	[a]
FA Med ($mm^2 s^{-1}$)	0.25 (0.72)	0.116, 0.730	[a]	[a]
WMH Load	−0.0086 (0.0072)	1.43, 0.230	[a]	[a]
TCV (ml)	1.1×10^{-8} (2.0×10^{-7})	0.00319, 0.960	[a]	[a]
Lacunes	**−0.15 (0.049)**	**9.43, 0.0024**	**−0.12 (0.053)**	**5.39, 0.021**
CMB	−0.034 (0.043)	0.631, 0.430	[a]	[a]
Age	−0.00044 (0.0023)	0.0376, 0.850	[a]	[a]
IQ	0.00017 (0.0014)	0.0143, 0.910	[a]	[a]
Sex	−0.057 (0.044)	1.63, 0.20	[a]	[a]
Years Stroke	**−0.013 (0.0038)**	**12.1, 0.0006**	−0.0087 (0.0054)	2.59, 0.110

Significant results shown in bold.
S.E. = standard error.
[a] Indicates variable was not included in multivariable model.

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* Corresponding author at: Neurosciences Research Centre, Molecular and Clinical Sciences Research Institute, St George's University of London, Cranmer Terrace, London SW17 0RE, UK.
E-mail address: p1206505@sgul.ac.uk (O.A. Williams).

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Table 6
Univariable and multivariate linear mixed effect models of executive function change related to change in magnetic resonance imaging biomarkers.

IPS	Univariable models		Multivariable Models	
	Beta (S.E.)	χ^2, p	Beta (S.E.)	X^2, p
DSEG θ	**−0.004 (0.0019)**	**4.47, 0.036**	−0.0025 (0.002)	1.66, 0.20
MD NPH	4.7 (5.7)	0.667, 0.41	[a]	[a]
MD Med ($mm^2 s^{-1}$)	−370 (390)	0.93, 0.34	[a]	[a]
FA NPH	**−150 (63)**	**5.34, 0.022**	**−140 (68)**	**3.94, 0.049**
FA Med ($mm^2 s^{-1}$)	0.62 (0.55)	1.27, 0.26	[a]	[a]
WMH Load	−0.0012 (0.0055)	0.0516, 0.82	[a]	[a]
TCV (ml)	**$3.2 \times 10^{-7}(1.4 \times 10^{-7})$**	**4.84, 0.029**	2.4×10^{-7} (1.5×10^{-7})	2.45, 0.12
Lacunes	−0.079 (0.043)	3.32, 0.07	[a]	[a]
CMB	−0.039 (0.032)	1.47, 0.23	[a]	[a]
Age	−0.0022 (0.002)	1.26, 0.26	[a]	[a]
IQ	0.00053 (0.0012)	0.185, 0.67	[a]	[a]
Sex	0.021 (0.039)	0.298, 0.59	[a]	[a]
Years Stroke	**−0.008 (0.0036)**	**4.81, 0.029**	−0.0043 (0.0046)	0.904, 0.34

Significant results shown in bold.
S.E. = standard error.
[a] Indicates variable was not included in multivariable model.

analyses, it does not remain significant in the multivariable analyses as previously stated. Furthermore, changes in histogram metrics of FA and MD were not associated to EF and only change in FA NPH was significantly associated with IPS, whereas all four metrics were originally reported to be associated with change in EF and IPS.

The changes in the results do effect some of the conclusions in the original article. While DSEG θ is a valid measure of cerebral small vessel disease (SVD) and is associated with change in EF and IPS, we must retract the statement that DSEG θ “provides the strongest predictor of cognitive change” as, in the multivariable models, lacunar infarcts and FA NPH were associated with change in EF and IPS respectively. Nevertheless, DSEG θ provides a marker of SVD severity that is related to changes in cognitive performance.

The authors would like to apologize for any inconvenience caused by this error.