NeuroImage xxx (2018) 1–2

Contents lists available at ScienceDirect

NeuroImage

journal homepage: www.elsevier.com/locate/neuroimage

Corrigendum

# Corrigendum to 'Normative data for subcortical regional volumes over the lifetime of the adult human brain' [NeuroImage 137 (2016) 9–20]

Olivier Potvin [a], Abderazzak Mouiha [a], Louis Dieumegarde [a], Simon Duchesne [a,b,*]

[a] CERVO Brain Research Center, 2601, de la Canardière, Québec G1J 2G3, Canada
[b] Département de radiologie, Université Laval, 1050, avenue de la Médecine, Québec G1V 0A6, Canada

We have recently uncovered a flaw in our statistical method that impacts the semi-partial $R^2$ results presented in Figure 1. These values were computed using the option *Effect size* within the *GLM* procedure of the SAS statistical software and are labeled by SAS as semi-partial eta squares. These values are, in fact, a partitioned $R^2$ according to a given order of predictors' entry. The main impact of this procedure is that the order of the predictors influences the semi-partial $R^2$. While it does not impact the regression models, for those readers that are drawing conclusions based on the relative importance of the predictors, we felt compelled to provide more accurate and robust results.

In all of our analyses, the predictors were listed in a given, unvarying order as presented in the article tables (age, age$^2$, age$^3$, sex, estimated intracranial volume (eTIV), eTIV$^2$, eTIV$^3$, magnetic field strength, GE manufacturer, and Philips manufacturer, followed by interactions). Therefore, the variables listed earlier were favored in terms of $R^2$ compared to the variables entered later.

This new Figure 1 shows $R^2$ for each predictor computed using the *calc.relimp* function of the R package *relaimpo* (relative importance in linear models). The metric used is lmg, based on Lindeman, Merenda, and Gold (1980), which is a $R^2$ partitioned by averaging sequential sums of squares over all orderings of the predictors, effectively correcting this situation. While the total $R^2$ remains intact, the main difference of this new metric compare to the original is that for nearly all regional volume, age and sex have lower $R^2$ (mean age: −7% (range: −12 to 0), sex: −4% (−10 to 0)) while eTIV and interactions have higher $R^2$ (mean eTIV: 3% (−1 to 11), all interactions: 7% (0–15)) compared to the original results. Finally, there were very limited differences for scanner magnetic field strength and scanner manufacturer.

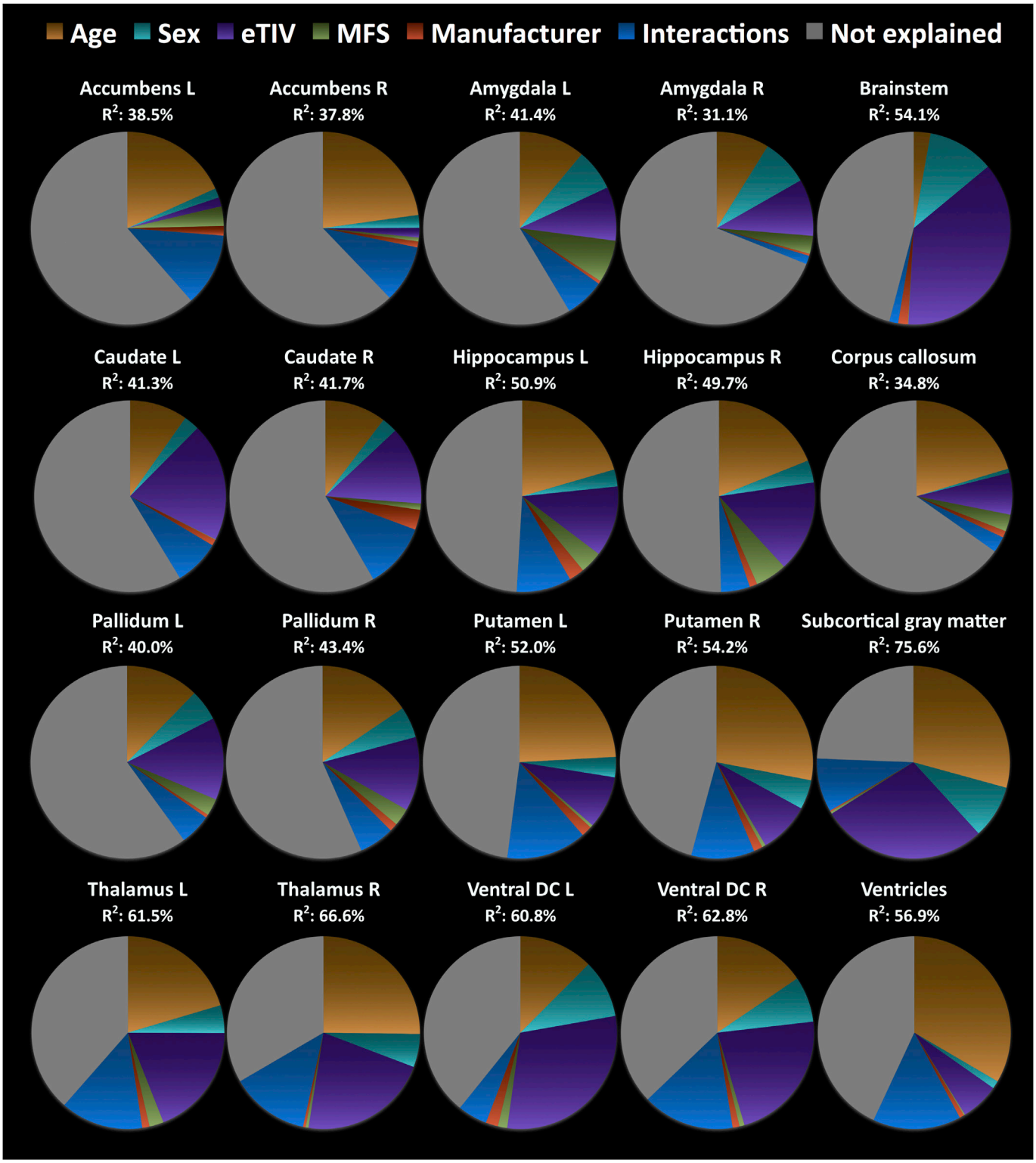
We would like to apologize for any inconvenience caused.

DOI of original article: https://doi.org/10.1016/j.neuroimage.2016.05.016.
* Corresponding author. Centre de recherche de l'Institut universitaire en santé mentale de Québec, 2601, de la Canardière, Québec G1J 2G3, Canada.
*E-mail address:* simon.duchesne@fmed.ulaval.ca (S. Duchesne).

https://doi.org/10.1016/j.neuroimage.2018.09.020

Available online xxxx
1053-8119/© 2018 Elsevier Inc. All rights reserved.

Please cite this article in press as: Potvin, O., et al., Corrigendum to 'Normative data for subcortical regional volumes over the lifetime of the adult human brain' [NeuroImage 137 (2016) 9–20], NeuroImage (2018), https://doi.org/10.1016/j.neuroimage.2018.09.020


Age
Sex
eTIV
MFS
Manufacturer
Interactions
Not explained
Accumbens L
R²: 38.5%
Accumbens R
R²: 37.8%
Amygdala L
R²: 41.4%
Amygdala R
R²: 31.1%
Brainstem
R²: 54.1%
Caudate L
R²: 41.3%
Caudate R
R²: 41.7%
Hippocampus L
R²: 50.9%
Hippocampus R
R²: 49.7%
Corpus callosum
R²: 34.8%
Pallidum L
R²: 40.0%
Pallidum R
R²: 43.4%
Putamen L
R²: 52.0%
Putamen R
R²: 54.2%
Subcortical gray matter
R²: 75.6%
Thalamus L
R²: 61.5%
Thalamus R
R²: 66.6%
Ventral DC L
R²: 60.8%
Ventral DC R
R²: 62.8%
Ventricles
R²: 56.9%