Review of: "Coupling between Human Brain Cortical Thickness and Glucose Metabolism from Regional to Connective level: a PET/MRI study"

Feng Yan[1]

1 University of Oklahoma

Potential competing interests: No potential competing interests to declare.

The authors in the study “Coupling between Human Brain Cortical Thickness and Glucose Metabolism from Regional to Connective level: a PET/MRI study” proposed a PET/MRI imaging study for exploring the disruption of the balance between brain structure and functions in different age groups, which also aimed to investigate the coupling between the brain cortical thickness and glucose metabolism. Their results found that there is a coupling between cortical thickness and glucose metabolism from the regional to connective level. There are several concerns in this manuscript that need to be addressed by the authors.

1. Is CT the abbreviation of cortical thickness in Fig. 2? The abbreviation should be consistent in the entire manuscript. Moreover, more descriptions of the figure and subfigures including the value unit and details are needed.

2. The description of middle and old age groups should be consistent in the network similarity part. What is the young and old population comparison?

3. The dotted areas in Fig. 3 should be labeled clearer.

4. In Fig. 3c and 3f, the authors described that the old age group showed a significantly higher SC-FC coupling than the middle age group in the right frontal pole, right insula, and right postcentral regions. Why does the third region image at the first row in Fig. 3f have not the r-value signal corresponding to the same area in Fig. 3c?