### Accepted Manuscript

Progressive brain rich-club network disruption from clinically isolated syndrome towards multiple sclerosis

Yaou Liu, Yunyun Duan, Jing Huang, Zhuoqiong Ren, Zheng Liu, Huiqing Dong, Frederik Barkhof, Kuncheng Li, Ni Shu

PII: S2213-1582(18)30104-9

DOI: doi:10.1016/j.nicl.2018.03.034

Reference: YNICL 1356

To appear in: NeuroImage: Clinical

Received date: 20 December 2017 Revised date: 14 March 2018 Accepted date: 26 March 2018



Please cite this article as: Yaou Liu, Yunyun Duan, Jing Huang, Zhuoqiong Ren, Zheng Liu, Huiqing Dong, Frederik Barkhof, Kuncheng Li, Ni Shu, Progressive brain rich-club network disruption from clinically isolated syndrome towards multiple sclerosis. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Ynicl(2017), doi:10.1016/j.nicl.2018.03.034

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## **ACCEPTED MANUSCRIPT**

### Title Page:

# Progressive brain rich-club network disruption from clinically isolated syndrome towards multiple sclerosis

Yaou Liu<sup>1,2,3,4</sup>, Yunyun Duan<sup>1,2,3</sup>, Jing Huang<sup>3</sup>, Zhuoqiong Ren<sup>3</sup>, Zheng Liu<sup>5</sup>, Huiqing Dong<sup>5</sup>, Frederik Barkhof<sup>4,6</sup>, Kuncheng Li<sup>3\*</sup>, Ni Shu<sup>7,8,9\*</sup>

<sup>1</sup>Department of Radiology, Beijing Tiantan Hospital, Capital Medical University, Beijing, China;

<sup>2</sup>Tiantan Image Research Center, China National Clinical Research Center for Neurological Diseases, Beijing, China;

<sup>3</sup>Department of Neurology, Xuanwu Hospital, Capital Medical University, Beijing, China; <sup>4</sup>Department of Radiology and Nuclear Medicine, Neuroscience Campus Amsterdam, VU University Medical Center, Amsterdam, The Netherlands;

<sup>5</sup>Department of Neurology, Xuanwu Hospital, Capital Medical University, Beijing, China;

<sup>6</sup>Institute of Neurology and Healthcare Engineering, University College London, England;

<sup>7</sup>State Key Laboratory of Cognitive Neuroscience and Learning & IDG/McGovern Institute for Brain Research, Beijing Normal University, Beijing, China;

<sup>8</sup>Center for Collaboration and Innovation in Brain and Learning Sciences, Beijing Normal University, Beijing, China;

<sup>9</sup>Beijing Key Laboratory of Brain Imaging and Connectomics, Beijing Normal University, Beijing, China.

#### Download English Version:

# https://daneshyari.com/en/article/8687624

Download Persian Version:

https://daneshyari.com/article/8687624

<u>Daneshyari.com</u>