

Reviewer's report

Title: Chinese Acute Ischemic Stroke Treatment Outcome Registry (CASTOR): protocol for a prospective registry study on patterns of real-world treatment of acute ischemic stroke in China

Version: 0 **Date:** 26 Jan 2017

Reviewer: Peter Kolominsky-Rabas

Reviewer's report:

Review of „Chinese Acute Ischemic Stroke Treatment Outcome Registry (CASTOR): protocol for a prospective registry study on patterns of real-world treatment of acute ischemic stroke in China"16

The authors provided a study protocol with clear structure and detailed study design information. The whole manuscript is well written and easy to understand.

1. The use of QALY (Quality Adjusted Life Years) should be re-considered since the total follow-up of maximum for 1 year.
2. What is the rationale of defining 5 visits in 12 months? There are clear cut international standards for visits such as the Helsingborg Declaration released in 1998 and 2006. Is there any evidence-based agreed guidance for this?
3. In addition, I strongly suggest that the authors give this paper to an English native speaker to do the grammar checking.

Need for clarification for each page in detail:

Page 2

#16 what is patterns?

#25 acute phase of AIS = AIS?

#27 "The patients are treated for AIS as how they would really be treated in the hospitals." is not clear for me.

Page 3

#1 increased---increasing

#9 help to find

Page 4

#12 cerebral stroke is stroke?

#29 please unify the terminology of stroke, the authors can use the name from "American Heart Association"

http://www.strokeassociation.org/STROKEORG/AboutStroke/TypesofStroke/Types-of-Stroke_UCM_308531_SubHomePage.jsp

#30 has thrombectomy device put into practice in China?

#45 the second 'is' is not necessary

Page 5

#49 prospective, not perspective

#55 do you mean that the reason you define the sample size of 10,000 patients because there is a Chinese Guideline?

#60 you mean you have a follow-up totally one year or after 5 visits, is there an extra 1 year follow up?

Page 8

#38 does it make sense to do CUA? Whose perspective is key in the economic evaluation (payer? societal?) You enrolled the patients within 1 week after onset, and collect data until visit 4, all the data is prospective, is there big difference?

Page 10

#8 you have a SOP to guide the data collection procedure?

#11 could you please specify, how often do you plan to conduct 'periodic analysis'? or until how many number of patients being enrolled?

#28 could you please explain again about how you define the sample size?

Major consideration:

The whole manuscript as well as the references are not reflecting the current international state-of-the-art on population-based stroke registries.

The study protocol reflects the authors' previous publication track rather than methodological scientific standards and international good-practice experiences in the field of stroke registries. From 20 references, 16 references are from mainland China. Most important publications in this field are ignored.

In the last two decades 'real-world' population-based stroke registries in US, European Union, Australia/ NZ defined global standards (Wahlgren 2007 (SITS-MOST); Heuschmann PU et al. 2004 (in-hospital mortality of AIS); Kolominsky-Rabas et al. 2001 (TOAST classification in stroke registry) as well as 5 RCTs in 2015 on thrombectomy in AIS patients. These basic publications should be part of every registry protocol reflecting good scientific standards in the 21st century.

Are the methods appropriate and well described?

If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?

If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?

If not, please explain in your comments to the authors.

Unable to assess

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?

If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English

Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests

Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?
2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?
3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?
4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?
5. Do you have any other financial competing interests?
6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (<http://creativecommons.org/licenses/by/4.0/>). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal