Reviewer's report

**Title:** Comparative-Effectiveness Research on Patients with Acute Ischemic Stroke Using Markov Decision Processes

**Version:** 1  **Date:** 8 August 2011

**Reviewer:** ATHANASSIOS VOZIKIS

**Reviewer's report:**

Minor Essential Revisions

There are several substantial limitations in the paper. First of all, the model of applying a treatment and conducting it without any change through the whole course of acute stroke could not adequately consistent with Evidence Based Medicine (EMB). Moreover, the effectiveness between different prescriptions of TCM was not comparable. Finally, the optimal interventions obtained by MDPs in the paper, still need further validation in clinical practice.

But, as an option of new methods which might be useful in comparative effectiveness researches, the application of MDPs in dynamically comparing the effectiveness of variety combinations of complex treatments could be a thoughtful solution for uncertainties related with patient’s individually response to certain combination of treatments as well as the uncertainties concerning dynamic change of treatments for certain patients during the process of disease.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

'I declare that I have no competing interests'