Reviewer’s report

Title: Sorafenib versus Transarterial Chemoembolization for Advanced-Stage Hepatocellular Carcinoma: A Cost-Effectiveness Analysis

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Reviewer: Rudolf Stauber

Reviewer's report:

Chen et al analyzed cost-effectiveness of treating advanced HCC with sorafenib (full-dose vs. dose-adjusted) vs. TACE based on a systematic review of 27 articles.

They conclude that full-dose sorafenib is cost-effective in advanced HCC under accepted thresholds of WTP.

While this study provides some valuable insights in the costs of sorafenib and TACE treatment within the USA and China, I feel that the conclusions are not well supported by the data presented.

Several issues require further attention:

1. What are accepted thresholds of WTP?

2. Since medical charging systems are different throughout the world, the data presented in this study for USA and China cannot be easily extrapolated to other parts of the world.

3. Characteristics of the patients remain largely unclear. As stated on page 7, adult patients with advanced HCC (vascular invasion/extrahepatic spread in symptomatic patients with Child-A/B stage) were studied in a Markov model. Information on the BCLC stage is lacking. Advanced stage (BCLC-C stage) may be due to either vascular invasion, extrahepatic spread or symptoms (ECOG PST 1-2), what were the individual proportions of this features in (i) TACE and (ii) sorafenib treated patients?
4. As correctly pointed out on page 6, there are no RCTs comparing efficacy of TACE and sorafenib in advanced HCC. Comparison of their efficacy based on retrospective data are of limited value due to selection bias.

5. Abbreviations should be explained when first mentioned in the manuscript (e.g. WTP = willing to pay, explained first on page 13 instead of page 12).

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.

No

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.

I recommend additional statistical review

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Needs some language corrections before being published
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