Reviewer’s report

Title: Systematic study of the effects of lowering low-density lipoprotein-cholesterol on regression of coronary atherosclerotic plaques using intravascular ultrasound in Western and Asian

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Reviewer: marco pavani

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Major compulsory revisions

1.) While the primary end point of this study was the volume change of CAP detected by IVUS, the authors should say if the dosage and percent of LDL-C reduction are considered primary or secondary outcome of their work. In the conclusions they say that "For regressing CAP, Asians need lower dosage of statins or lower intensity LDL-C lowering therapy (by >36%) than Westerns (by 45%) but don't talk about the primary endpoint.

2.) On page 4 I think that Materials and methods should be better explained.

3.) In the selection criteria of the study the authors don't say in the text how they have included 18 trials (line 86). Furthermore in line 66-67 the various groups are not very clearly specified.

4.) On page six, last paragraph, when the authors write "as in the study (3).......", i think it should be difficult to understand the authors' message.

5.) I've not understand how they explain that sensitivity analyses about LDL-C lowering in group >70#100HP mg/dL could lead to regression of CAP with reduction of the CAP volume when the arm of 2009 JAPAN-ACS Ato was omitted and also when the arm of 2009 COSMOS Ros was omitted, but that LDL-C lowering in group#70 mg/dL could not significantly lead to regression of CAP with reduction of the CAP volume when the arm of 2012 ARTMAP Ros or 2012 ARTMAP Ato were omitted?

6.) I've found (like they have in part analysed in the study limitations ) that different follow up between the various works and especially between western and asian studies (are we sure that late follow-up works the same as for asian people?), as well as different type of statins and dosage (although considering statin class effect ) are important limits of this meta-analysis.

7.) Most of the studies are conducted only in CAD people; should we consider it a bias?

8.) In the discussion, the authors should try to explain why statins do not have a class effect in their meta-analysis, if there are other possible factor that could
influence the results (like different lifestyle, different diet or other conditions).

9.) In the discussion, pages 13, first paragraph, the authors should try to better describe which tables the data are related to.

The main purpose of this meta-analysis has been previously evaluated by other study in literature, also taken in account by the authors in the Discussion (study 32,33), so I don't think it's a original question posed by the authors.

The authors declared that they have no competing interests.

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests