Reviewer's report

Title: Magnetic Resonance Adenosine Perfusion Imaging as Gatekeeper of Invasive Coronary Intervention (MAGnet): study protocol for a randomized controlled trial

Version: 0 Date: 19 Jun 2017

Reviewer: Kai Müllerleile

Reviewer's report:

This study addresses a very important and exciting topic, however I have some concerns on the study design which require clarification:

1) "MR-INFORM" findings are now available and need to be included in this manuscript. The investigators should clarify the potential incremental value of their study.

2) Study-design: Is randomization to "100% invasive" vs. "CMR" really a good (and "fair") design? The rate of invasive angiographies will inevitably be much lower in the CMR arm (100% vs. 30%), but is this really a clinical meaningful observation? From my point of view, this randomization does not reflect "state of the art" (although sometimes clinical reality...) handling of suspected CAD in favor of the CMR arm. A finding like "CMR strategy prevented XY unnecessary invasive coronary angiographies" is predictable. It seems to be much more meaningful, to test CMR vs. "standard care 2017" (including stress-echo etc.) instead of focusing on reducing the number of invasive angiographies without correct indication (= without pre-cath ischemia testing or high pre-test likelihood) by CMR. Ultimately, ischemia imaging always reduces the number of invasive angiographies/PCI, but CMR needs to (and already has) demonstrate(d) - its competitiveness vs. other modalities.

3) The expected annual event rate of 6.3% in ischemia-positive patients is quite high e.g. compared with MR-INFORM or other similar trials. Is a sample size of 2 x 90 pts. really large enough?
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Is it essential that this manuscript is seen by an expert statistician? If so, please give your reasons in your report.

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