Reviewer's report

Title: Adding attenuation corrected images in myocardial perfusion imaging reduces the need for a rest study

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Reviewer: Rungroj Krittayaphong

Reviewer's report:

The authors studied the role of adding attenuation corrected images in myocardial perfusion imaging in the reduction of the need for a rest study.

The concept of the study sound reasonable and the result of the study should have impact on the benefit of the reduction in radiation dose, scan time and cost. However, the method of this study to answer the question seems to be inadequate. The authors use physician judgment to assess whether rest study should be needed. The final reports on the clinical routine were used for comparison.

The major problem is the gold standard to prove that the physician judgment on the need for rest image is correct or not. Final report on clinical routine is not good enough. There may be several readers with variation in the image interpretation. To answer the research question, a prospective study should be performed with a better gold standard together with the study of intra-observer and inter-observer variation and analysis of image quality. Patient outcome on the follow-up may be use for a guide for the clinical impact with and without attenuation correction.

As shown in the result, only 1 was missed by NC but 15 by NC + AC. Although the missed cases may have mild disease more than severe disease, the detection of the mild disease cases may also have impact in the secondary prevention of such patients.

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: No, the manuscript does not need to be seen by a statistician.