Reviewer's report

Title: Applicability of the ankle-brachial-index measurement as screening device for high cardiovascular risk: an observational study

Version: 1 Date: 16 January 2012

Reviewer: Sanne A. E. Peters

Reviewer's report:

The authors aim to study the feasibility of the assessment of ABI in general practice. The authors conclude that screening in the overall population is not feasible whereas screening in a selected group of patients may be. The paper covers a relevant topic and includes a review of the literature. However, some parts of the paper warrant further explanation and attention.

Abstract
The goal of the study is not clearly defined. The authors aim to assess the impact of ABI as screening tool. The impact on what? Death rates, risk reduction? Some further clarification is needed here. Also, it is not clear from the abstract why the authors state that there is some guidelines recommending ABI.

Background
Main comment
The introduction is very general and may be more focussed and structured. Please avoid repetition.

Minor issues
- what do the authors mean by ‘an important increased risk for cardiovascular morbidity and mortality’?
- please provide a reference for ‘abnormal ABI provides incremental prognostic information’.

Methods
Main comment
The methodology for the systematic review, and composition of the general population is lacking but needed.

Results and discussion
Main comment
There is no separate results and discussion section which makes the paper a bit messy and unstructured. It is difficult to get the main point of the authors. Also, some methodological issues are described in these paragraphs whereas they should have been described in the methods section.
Specific comments
Contemporary guidelines
The authors summarize the recommendations from several guidelines. It is difficult to distinguish between these guidelines once reading the text. A table with an overview of the guidelines is strongly recommended.

Population composition
The authors assume that the prevalence of common vascular risk factors is unrelated. This seems to be a very strong and maybe an implausible assumption since it is generally understood that vascular risk factors tend to cluster.

Time-investment using ABI
The authors seem to only have included GP’s which included more than 20 patients. What was the rationale for this decision and may this choice limit the generalizability or introduce selection bias?

Feasibility
The authors describe that the ABI screening may be performed every 5 years. Is there any necessity for repetition? The authors did not mention this point before.

The authors describe that they doubt about the feasibility of ABI for screening purposes. The reasons, however, are not clearly described.

The authors suggest that ABI should be repeated once getting older. This seems contradicting with their previous recommendations. Also, they argue that the measurement should be repeated because patients are getting older. It seems logical that such strategy would track the natural course of atherosclerosis rather than diagnosing high risk patients.

The authors introduce the PREVALENT prediction model. This model seems to be developed by the authors themselves. Has the model been validated? A further description of the model is needed since the average reader may not be aware of this prediction rule.

Conclusion
Please rephrase the conclusion. Wordings as ‘in our opinion’ may not be preferred in scientific publications. Also, why do the authors recommend performing a cost-effectiveness analysis if they are in doubt about the feasibility of the procedure?

Level of interest: An article of importance in its field

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

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

**Declaration of competing interests:**

I declare that I have no competing interests