Reviewer’s report

Title: Population risk factor estimates for abdominal aortic aneurysm from electronic medical records: a case control study

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Reviewer: Steinar Solberg

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This paper, which is well written and from a large database-system, has two main topics: 1) AAA epidemiology and 2) The use of electronic medical records in order to do facilitate epidemiologic studies. However, I do have some concern.

Regarding AAA epidemiology a large body of previous knowledge is confirmed. In addition, a reverse relation between benign neoplasms and risk for AAA is identified as a new finding. Both the epidemiological, clinical and biological significance of this finding is unclear.

On page 12, the authors correctly state “Generalizability of the results to other populations is unknown, ...” The main concern regarding this is that few populations outside the Geisner Health System in Pennsylvania is registered in such a comprehensive database as presented here. The quality of the input into clinical databases varies a lot. In addition, not all of the electronic medical record systems make queries, as done in this report, possible.

On page 4, the authors state “... AAA is an ideal disease for a screening program.” Further, an ideal screening program should be offered to a defined risk group extracted from a complete / general population. The population studied here is the 2.6 million inhabitants included in the Geisner Health System. The percentage of the population in the actual area this represents is not stated.

Level of interest: An article of limited interest

Quality of written English: Acceptable

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.