**Reviewer’s report**

**Title:** Central Obesity and Atherogenic Dyslipidemia in Metabolic Syndrome are Associated with Increased Risk for Colorectal Adenoma in a Chinese Population

**Version:** 2  **Date:** 26 February 2010

**Reviewer:** Jonas Manjer

**Reviewer’s report:**

This study examines the potential association between the MetS (and its single components) and CR polyps / adenomas.

The study is well designed. The data is suitable for the analysis.

The risk of adenomas has not been thoroughly investigated and is important considering the relation to colorectal cancer.

The material and methods section need some additions and the data may actually reveal more information if some additional analyses are performed.

Major Compulsory Revisions have been marked below with” *”. All other comments are Discretionary Revisions

Overall, the findings related to CRP are interesting and it can be considered to introduce this already in the introduction. The novelty of the paper would increase.

**ABSTRACT**

Clearly written, easy to follow. Main findings presented.

1. CI:s should always be given.

**INTRODUCTION**

2. Triglycerides may be mentioned on line 2-3.

*3. A reference should be given concerning cancer statistics in Taiwan.

**METHODS**

*4. Sampling frame – who was invited to the examination? Rationale for colonoscopy?

*5. Was this a population-based sample? Public hospital?

*6. Inclusion criteria? Age? Sex?
*7. Invited patients – how many?  
*8. Exclusion criteria besides colorectal disease? That is, exclusion before examination.  
*9. Method for CRP should be given.  
*10. Weight – without clothes? Light clothing?  
11. Consider using SI unit for WC.  
*12. Additional questions on HRT and menopausal status seems to have been part of the examination. Describe how this was assessed and classified!  
*13. Polyps and adenomas were probably classified following a pathological examination. This should be described more clearly. Which Pathology Dept.?  

STATISTICAL ANALYSIS  
The analysis is adequate, but there are more aspects that can be covered. The paper would be more complete following this.  
* 14. The Scheffes test should be presented in this section. Rationale? p-value?  
* 15. This sentence is not clear: “multinomial log reg analysis was used to estimate the ORs of Mets by age, MetS status, smoking and alc consumtion status”. Does it mean that these factors were used as co-variates or that the potential assoc MetS-adenomas was investigated in different strata of these factors?  

RESULTS  
16. Throughout for all tables the definitions of high / low values are also given in the text and this can be omitted from the tables in order to increase readability.  
*17. The use of data on alcohol consumption in these analyses is not clear. Is it used as a co-variate? In that case it should be presented in table 2.  
*18. It is not clear if smoking is adjusted for, see §15 and §17 above.  
19. I would strongly suggest that all analyses (table 3) are first performed in all subjects, and then separately for men and women (also for individual components of the MetS). Several previous studies have shown that single factors of the MetS may have opposite association with cancer in men and women. Such a stratified analysis would be a strength in the current analysis.  
*20. Table 3 should include:  
- number of cases in each category  
- number of healthy subjects in each category  
- crude OR:s
- adjusted OR:s

*21. Findings on CRP may be presented in table 3.

22. The definition of the MetS is somewhat arbitrary and differs between different investigators. The authors may consider also to present OR:s for metabolic factors analysed as continuous variables.

23. Co-variation is indeed a problem. Would it be possible to include all individual components in the same multivariate model? Either as dichotomous or continuous variables.

24. It is not necessary to write “95% CI” in the text following the first definition.

DISCUSSION

The discussion includes a thorough discussion of the findings in relation to current literature.

There is very little on methodological issues/problems.

*25. Potential misclassification of polyps / adenomas. Several pathologists? Discuss!

*26. Potential misclassification of metabolic factors? CV:s? Discuss if this is a potential problem!

*27. Selection bias? – were these patients representative of the entire background population? If not – would this have affected the conclusion in this study?

*28. Detection bias? – these patients were asymptomatic – does it affect the comparison with symptomatic adenomas, clinically significant adenomas? Is this important from a biological point of view? Discuss!

*29. Additional confounding? Some more additional risk factors for adenomas that were not assessed? What other factors may be important? Discuss e.g. lifestyle.

*30. Type I error. A lot of multiple comparisons (many factors) are made. Discuss the problem of mass-significance. Are the results likely to have been caused by this? (I don’t believe so!)

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

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 /JM