Reviewer's report

**Title:** The relationship between body composition and cardiovascular risk factors in young Australian men

**Version:** 3  **Date:** 29 May 2013

**Reviewer:** Dan S Sharp

**Reviewer's report:**

The authors seem to have missed the concern of Kelly et al (Ref 78) about the use of % fat mass over an index. The use of a fat mass index, which the authors attempt and summarize in an appendix to reviewers only, seems to be dismissed without sufficient justification. Their claim that fat mass indexes remain to be validated in longitudinal cohort studies and thus justifying the continuance of the % fat mass as the DEXA-derived variable of interest does not, in my mind, obtain. There are published papers in the literature indicating the improved classification of DEXA-derived indexes pertaining to various anthropometric components of adiposity, compared to BMI, with well-established cardiovascular risk factors--admittedly cross-sectional in nature; however, I would suggest that these findings being only "cross-sectional" associations are not sufficient to justify their exclusion and the persistent use of BMI and % fat mass as the criteria for classifying lean and overweight groups.