Reviewer’s report

Title: Meat consumption and risk of primary hip and knee joint replacement due to osteoarthritis: a prospective cohort study

Version: 1 Date: 2 November 2010

Reviewer: Tim Spector

Reviewer’s report:

Decision.
Revise and resubmit

Wang et al;

This is a large prospective study of meat consumption and joint replacement. The area is of interest and the study is large with several hundred cases and 30,000 controls. However it has a number of pitfalls.

Points that need addressing.
1. The lack of consistency and rationale between hip and knee is a worry- and suggests the findings may be spurious - which the authors don't fully acknowledge.
2. It is not clear whether other causes of joint replacement like AVN or fractures are correctly excluded.
3. There is a problem here of multiple testing. In theory there are at least two diseases and over a hundred nutrients being tested. Dividing p values by 200 would be over-conservative but safe. As a minimum this requires discussion.
4. What is the effect of BMI- this is unclear.? It should emerge as a risk factor for knee.
5. The low Kappa values between the two surveys are a worry.
6. The final discussion and summary needs to take on-board many more caveats . Clearly this is a hypothesis generating study only - especially in light of the 2 previous studies showing no effect.