Reviewer's report

Title: Strong association between non alcoholic fatty liver disease (NAFLD) and low 25(OH) vitamin D levels in an adult population with normal serum liver enzymes.

Version: 4 Date: 17 May 2011

Reviewer: Jane Lynch

Reviewer's report:

Re-review:
Redone statistics using more appropriate variables and correct methods description of regression analysis used is helpful. Appreciate redone statistics adjusting for BMI as well as type 2 DM.

162 of 262 patients referred for fatty liver disease (NAFLD) had significantly lower levels of 25OH Vit D than matched subjects without NAFLD. This is known association and patients with insulin resistance are often found to have fatty liver as well as lower vitamin D levels as seen in obesity. The discussion is more appropriately commenting on the association of vit D levels being inversely related to dysmetabolic markers and speculating on the role for NAFLD. I do not believe you can make any statements beyond theory on cirrhosis outcomes using ultrasound data without biopsies.

Major Compulsory Revisions:

Minor Essential Revisions

The astute reader familiar with NASH and NAFLD research will find interesting data in this article however it is important to appreciate the following limitations
The evaluation relies on AST and ALT and does not rule out other less common causes of NAFLD. Liver disease not well quantified by ultrasound fat assessment. You can only state that low 25OH vit D is ASSOCIATED with the presence of NAFLD, not state that it is a risk factor.

Grammar still needs attention

Discretionary Revisions

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

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