Reviewer’s report

Title: The effect of continuous ultrasound on chronic non-specific low back pain: A single blind sham-controlled randomized trial

Version: 3 Date: 20 June 2012

Reviewer: Tim Watson

Reviewer's report:

Thank you for submitting this revised paper. I note with interest that following a reworking of the data and analysis, that the results are now quite different from those originally proposed.

There are some issues remaining, but I would consider them to be generally minor in nature and are listed below for your consideration:

Abstract: in the methods section, worth including 'continuous' in the ultrasound parameters, so that there is no doubt in this regard. I appreciate that the detail is included in the text that follows, but for those skimming the abstract, it would be helpful.

Page 5: sample size: you do not identify WHICH effect size is assumed to be at 0.8 - clarification would assist

Page 6: second last paragraph: not sure what an 'almost large area' is?

Page 7: typo last paragraph: CLBL

Page 9: end section on outcome measures. Units missing from sample rate and gain

Page 10 end data analysis section: your use of p values is inconsistent - sometimes upper case and sometimes lower case. Technically, it should be lower case. Whichever you use, it should be consistent throughout the document

Page 12: end results section: statistical significance rather than statistical signficancy

Page 13: second last paragraph: . . . US deliver was very unspecified . . . - I know what you mean, but might be better use to use 'variable' or 'inconsistent' or some equivalent term

End page 13, top P 14: I would take issue with the placebo ultrasound being consistent between groups. The mechanical application of the ultrasound head was indeed consistent, but this is not the same as the 'placebo' effect. Your argument can stand IF you make it the mechanics of application which is common to both groups
Page 15: last paragraph: there is considerable evidence that the extensibility of collagen based tissues will change with ultrasound thermal applications so long as sufficient temperature change is achieved. See Lehmann and several other authors by way of references for this. Draper, who you have included in your citations also discusses this in several of his papers.

Page 16, last sentence: Sung reference is missing - think it is number 55

Page 17: Paragraph starting 'one aim of the present study...' the last sentence is very difficult to understand and should be rephrased

Next paragraph: it is possible that continuous ultrasound may have improved...

References:
Almost every reference has formatting issues. You need to be consistent with regards journal abbreviations (or not), spacing between names, commas, and text. Some references include 'volume' and 'issue', most do not. Check with the published journal agreed style.

There are typographical errors throughout, mainly with regards the use of commas and spaces - please check all text.

Level of interest: An article of importance in its field

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

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests.