Reviewer's report

Title: The Diagnostic Validity of Musculoskeletal Ultrasound in Lateral Epicondylalgia: A Systematic Review

Version: 1 Date: 31 July 2013

Reviewer: Helen Keen

Reviewer's report:

Thankyou for this interesting article. I think the objectives are well defined, and the methods appear appropriate.

I have some suggestions however.

The sensitivity and specificity are reported as whole numbers, but given the formula used for calculation, are these not normally reported as 0.98 (i.e., not 98)

The background references Grassi to conclude that US is the gold standard of imaging tendons, The Grassi paper was published in 2000, and makes this statement based on one paper, published in 1999 which examines only the tendons of the hand, and very old MRI technology to make this statement. At the time the statement was very strong, the statement should be watered down.

Please be consistent with your terminology, or explain. Is chronic Tennis elbow the same as LE?

In the methods section, please explain why studies were excluded if they used probe compression tenderness test?

I do not understand the last 2 sentences of the methods, could this be better explained?

Please clarify if Conventional Doppler is the same as Color Doppler, or be consistent.

In discussing Table 1, Neovascularisation is considered specific, but then you go on to say there is no evidence for the use of PDU. IS this because the neovascularisation was assessed in the studies using CDU? the article needs to be more clear with the distinction between PDU CPU and the term neovascularisation.

In Table 1, and the discussion, the terms Cortical irregularity, bone changes and enthesopathy are all used variably, how are these terms actually different, do they not describe the same thing? OMERACT US has defined enthesopathy, and these all form part of the definition.

A discussion as to why there is evidence to support CDU but not PDU is required. Is it because the studies have not been done with PDU? or because of
differences in the physics than mean PDU is not useful.

The conclusion hat there is no "convincing " evidence to use PDU is quite an emotive word, I think " no Published evidence" or no " statistical evidence" is more scientific.

**Level of interest:** An article whose findings are important to those with closely related research interests

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

**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'