Reviewer's report

Title: Assessment of bone marrow-derived cellular therapy in progressive multiple sclerosis (ACTiMuS): study protocol for a randomized controlled trial

Version: 3 Date: 3 August 2015

Reviewer: Rebecca Palmer

Reviewer's report:

The manuscript is well written with a brief but clear explanation of the background and purpose of the study.

I have noted just a few points where clarity and thus replicability could be improved:

Randomisation and blinding: the second paragraph states that the trial product will be shielded from participants. Could the authors provide additional detail on how this will be achieved?

Trial interventions: could the authors provide a brief description of venesection. Also in the final paragraph of this section, the authors state that bone marrow trephine and a sample of bone marrow aspirated will be retained for research. Could the authors make it clear whether it is for this research study or future research in this area?

Trial analyses:

Paragraph 1 - the authors state that a statistical analysis plan will be written prior to data collection. As data collection has already started, do the authors mean a SAP will be written prior to completion of data collection? Or that a SAP has been written? Please clarify.

Paragraph 2 - change in GEP is the primary outcome measure. Please state between which time points change is measured for the primary outcome.

Paragraph 4 - secondary outcomes will be scored according to standard methodology. Details are required to enable replication.

Finally just one typo has been identified in the eligibility and enrolment paragraph - 'entry' should read 'enter'. Also the acronym FBC needs to be added to the abbreviations list.