Reviewer’s report

Title: Changes in the serum vitamin D and PTH values using denosumab with or without bisphosphonate pre-treatment in osteoporotic patients: A short-term study

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Reviewer: Neil Gittoes

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Nakamura and colleagues report a small study looking at the impact of pretreatment with bisphosphonates prior to denosumab on markers of bone turnover and related variables. They show a difference between the two groups and propose differences in early mechanisms of action of denosumab between the two groups. Accepting that the study was very small, some of these observations are of potential interest.

Major

1. The study is very small with only 11 in each arm and thus it is difficult to draw any firm conclusions from such a small sample size.

2. The authors state that hypocalcaemia is a frequent complication of denosumab. Clinically relevant hypocalcaemia is not a frequent complication and thus this needs some clarification within the text. When hypocalcaemia is seen, it is often in the setting of untreated vitamin D deficiency and/or significant chronic renal impairment.

3. Do the authors believe that the observed differences in serum calcium following denosumab injection have any clinical relevance? The changes in adjusted calcium are clearly within the reference range.

4. What was the pretreatment management of vitamin D status in these patients?

5. It is stated in the text that denosumab has some bone forming action. This is rather an unconventional proposal and needs further expansion if the authors standby this conclusion. I assume the authors mean that bone formation was inhibited less than bone resorption but this needs some clarification.

6. Text is 25% too long.

Minor

1. Most acceptable terminology for serum calcium is adjusted for albumin.

2 Minor adjustments for use of English needs checking throughout.

Level of interest: An article of limited interest

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'