

## ANSWERING REVIEWERS



April 10, 2016

Dear Editor,

Please find enclosed the edited manuscript in word format (file name: 24479-Review.doc).

**Title:** Relative volume measured with magnetic resonance imaging is an articular collapse predictor in hematological pediatric patients with femoral head osteonecrosis

**Authors List:** Davide Ippolito, Alessandro Masetto, Pietro Andrea Bonaffini, Cammillo Talei Franzesi, Alessandra Silvia Casiraghi and Sandro Sironi

**Name of Journal:** *World Journal of Radiology*

**ESPS Manuscript NO:** 24479

The manuscript has been improved according to the suggestions of reviewers:

### Reviewers 1

Thank you for your comment.

### Reviewers 2

Thank you for your comment.

- According to the reviewer's suggestions the title was modified in "Relative volume measured with magnetic resonance imaging is an articular collapse predictor in hematological pediatric patients with femoral head osteonecrosis ": (see highlighted Title).
- In the abstract section the number 23 refers to the overall number of osteonecrotic lesions that involved the femoral head's and that we evaluated (13 out of 114 patients who developed joint collapse). The abstract was shortly better modified to specify this, accordingly to reviewer's suggestion. (see highlight in the abstract section).
- Considering the statistical analysis we used (ROC analysis), no p value can be offered. But in the clinical practice, the sensitivity and the specificity of the two different approach is significantly different. Unfortunately considering the statistical view two ROC analysis can not be compared each others.
- We are sorry about the occurred mistake between results and table, regarding the RS threshold value. The correct value is 0.50 and it in the table it was modified and updated, accordingly.

### Reviewers 3

Thank you for your comment. We agree with your comments, it is known that several parameters, such as bone density, BMI, the treatment of steroid, activity, may related with development of joint collapse. Fortunately the joint collapse of femoral head is not a frequent event, thus explain the incidence of it in our series (13/114 patients). We tried to investigated one parameters that could be reliably used in clinical practice, such as the femoral MRI involvement.

### Reviewers 4

Thank you for your comment.

Finally, we wish to thank the Editor and the Reviewers for their comments that helped us to increase the value of our paper.

Thank you again for publishing our manuscript in the *World Journal of Radiology*.

A handwritten signature in black ink, appearing to read 'D. Ippolito', written in a cursive style.

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## ANSWERING EDITOR-IN-CHIEF

ESPS Manuscript NO: 24479

### Response to Editor-in-Chief

"The area under the ROC curve for prediction of femoral head collapse based on percentage involvement of volume head by osteonecrosis was 0.969 (95% CI 0.800-1.000,  $p < 0.0001$ ); based on percentage involvement of surface head by osteonecrosis it was 0.908 (95% CI 0.713-0.988,  $p < 0.0001$ ).

Comparing the two ROC curves with the method of DeLong et al. (1988), the difference was not statistically significant ( $p = 0.2721$ ) but, it should be considered that our sample is too small to perform correctly this kind of analysis.

Based on our preliminary results, a larger sample of patients would be needed to show adequately this difference (approximately at least 70 femoral heads with osteonecrosis needed, with 5% type I error rate and 80% power)."

Sincerely yours,



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