Answer to the Letter to the Editor of Murata K, et al. concerning “Impact of spinal alignment and stiffness on impingement after total hip arthroplasty: a radiographic study of pre- and post-operative spinopelvic alignment” by Hagiwara S, et al. (Eur Spine J. 2020; <https://doi.org/10.1007/s00586-020-06589-z>)

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Received: 6 October 2020 / Accepted: 7 October 2020 / Published online: 22 October 2020
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Dear Editor,

We are grateful to the authors of this letter for their interest in our study, and we appreciate the question raised. Please find below our response to this question:

The comment indicated that the impingement is multifactorial, including implant design, implant orientation, extra-prosthetic impingement, and their mobilities. Although we agree with this idea, we did not evaluate these parameters in our study as they were out of the scope of our study. Our aim was to examine the risk factor from the pre-operative spinopelvic parameters. After this study, we changed the target alignment of the acetabular component according to the spinal alignment and stiffness. Clearance of the impingement is only surrogate, and implant impingement would be considered in future studies. In addition, clearance of the impingement was calculated from the sacral slope (SS) and femoral shaft angle. We have demonstrated the validity of each parameter in our study, which we believe to be sufficient.

Moreover, we did not define the terms “rigid” and “stiffness” in our paper. In previous studies [1, 2], the stiffness has been defined as $\leq 10^\circ$ of motion between the standing and sitting positions. The purpose of our study was to evaluate

the “impact” of stiffness on impingement; therefore, we performed multiple linear regression analysis and calculated the resultant regression coefficient.

We hope our explanation clarifies the issues raised.

Compliance with Ethical Statement

Conflict of interest The authors declare that they have no conflict of interest.

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