



# Letter to the Editor Regarding the Article: “Radiographic Evaluation of Postoperative Alignment in Total Knee Arthroplasty” – Thomaz LDG, Geist JGB, De Lucena RDL, Schwartzmann CR, Freitas GLS, Spinelli LF. *Rev Bras Ortop* 2021 [https://doi.org/10.1055/ s-0041-1726061](https://doi.org/10.1055/s-0041-1726061). (e-first)

*Carta ao editor sobre o artigo: “Avaliação radiográfica do  
alinhamento pós-operatório na artroplastia total de joelho”  
– Thomaz LDG, Geist JGB, De Lucena RDL, Schwartzmann CR,  
Freitas GLS, Spinelli LF. *Rev Bras Ortop* 2021 [https://doi.org/  
10.1055/s-0041-1726061](https://doi.org/10.1055/s-0041-1726061). (e-first)*

Rodrigo Sattamini Pires e Albuquerque<sup>1,2</sup> José Leonardo Rocha de Faria<sup>1</sup> Douglas Mello Pavão<sup>1</sup>

<sup>1</sup>Knee Surgery Center, Instituto Nacional de Ortopedia e  
Traumatologia, Rio de Janeiro, RJ, Brazil

<sup>2</sup>National Institute of Traumatology and Orthopedics, Faculdade de  
Medicina, Universidade Federal Fluminense (UFF), Niterói, RJ, Brazil

Address for correspondence Rodrigo Sattamini Pires e Albuquerque,  
PhD, Centro de Cirurgia do Joelho, Instituto Nacional de Ortopedia e  
Traumatologia, Av. Brasil, 500–Caju, Rio de Janeiro, RJ, 20940-070,  
Brazil (e-mail: rodalbuquerque19@gmail.com).

*Rev Bras Ortop* 2021;56(6):819–820.

Dear Editor,

First, we would like to congratulate the authors of the article entitled “Radiographic Evaluation of Postoperative Alignment in Total Knee Arthroplasty”<sup>1</sup> for the interesting article. In addition, we would also like to make some comments about the methodology used in the research.

We believe that the performance of orthostatic radiographs in the immediate postoperative period, still during hospitalization, may have compromised the quality of the imaging examination, considering that the intensity of pain and edema common to the immediate postoperative period often limits the total extension of the knee, especially during orthostatism.

The attitude in flexo and external rotation of the operated limb may have been a bias in relation to the correct positioning of the patient and the obtainment of the images. Radiography in the immediate postoperative period has not been shown to be beneficial,<sup>2</sup> and we believe, in line with Abu-Rajab et al.,<sup>3</sup> that the radiographic evaluation should have been performed in a later postoperative period, at around six weeks.

Another methodological point that we thought was inappropriate was to try to infer the location of the femoral head and the center of the ankle on short radiography. On short radiography, the only reproducible axis to be traced is the anatomical axis of the femur and tibia (tibiofemoral),<sup>4</sup> which

received  
May 21, 2021  
accepted  
September 2, 2021

DOI [https://doi.org/  
10.1055/s-0041-1736472](https://doi.org/10.1055/s-0041-1736472).  
ISSN 0102-3616.

© 2021. Sociedade Brasileira de Ortopedia e Traumatologia. All rights reserved.

This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial-License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Thieme Revinter Publicações Ltda., Rua do Matoso 170, Rio de Janeiro, RJ, CEP 20270-135, Brazil

is a good predictor of long-term alignment after total knee arthroplasty.<sup>4</sup>

We conclude that, methodologically, the panoramic radiographs should have been performed in a later postoperative period to avoid a positioning bias, and that a comparison of long and short radiography analyses could only be made taking into account the tibiofemoral anatomical axis. Attempting to infer the mechanical axis on a short x-ray causes an inference bias regarding the location of the femoral head and the center of the ankle.

#### Conflict of Interest

The authors have no conflict of interests to declare.

#### References

- 1 Thomaz LDG, Geist JGB, De Lucena RDL, Schwartzmann CR, Freitas GLS, Spinelli LF. Avaliação radiográfica do alinhamento pós-operatório na artroplastia total de joelho. [Publicação online: 2021-04-19]. Rev Bras Ortop 2021. Disponível em: <https://www.thieme-connect.de/products/ejournals/abstract/10.1055/s-0041-1726061>
- 2 Niskanen RO. Early repetitive radiography is unnecessary after an uncomplicated cemented hip or knee arthroplasty for osteoarthritis. Acta Orthop Belg 2005;71(06):692-695
- 3 Abu-Rajab RB, Deakin AH, Kandasami M, McGlynn J, Picard F, Kinninmonth AW. Hip-Knee-Ankle Radiographs Are More Appropriate for Assessment of Post-Operative Mechanical Alignment of Total Knee Arthroplasties than Standard AP Knee Radiographs. J Arthroplasty 2015;30(04):695-700
- 4 Ishii Y, Ohmori G, Bechtold JE, Sherman RE, Gustilo RB. Accuracy of the short radiograph in the measurement of the tibiofemoral angle. Knee 1995;2(02):81-84