

Commentary



Corresponding Author

Samuel K. Cho https://orcid.org/0000-0001-7511-2486

Department of Orthopaedics, Icahn School of Medicine at Mount Sinai, 787 11th Avenue, New York, NY 10019,

Email: samuel.cho@mountsinai.org

See the article "The Posterior Cranial Vertical Line: A Novel Radiographic Marker for Classifying Global Sagittal Alignment" via https://doi.org/10.14245/ ns.2346408.204.



This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (https://creativecommons.org/licenses/by-nc/4.0/) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Copyright © 2023 by the Korean Spinal Neurosurgery Society

Commentary on "The Posterior Cranial Vertical Line: A Novel Radiographic Marker for Classifying Global Sagittal Alignment"

Samuel K. Cho

Department of Orthopaedics, Icahn School of Medicine at Mount Sinai, New York, NY, USA

The radiographic study titled, "The Posterior Cranial Vertical Line: A Novel Radiographic Marker for Classifying Global Sagittal Alignment," proposes a "novel" radiographic measurement, namely PCVL, a vertical line drawn from the back of the skull, to calculate the relative distance between it and selected points below the head of the patient. With the advent of full-body radiography, the authors were able to appreciate the global alignment of asymptomatic persons and further their understanding of the interplay between different regions of the body relative to the head. I congratulate the authors as PCVL offers a simple way to quickly assess global sagittal alignment. Other investigators also have used this fullbody scan technology to assess "head-to-toe" alignment, and as the authors have alluded to in the body of their work, came up with such concepts as cranial sagittal vertical axis (crS-VA).² Looking ahead, it is important to further our understanding by analyzing how each region of the spine contributes to the overall alignment. The ever important spinopelvic relationship³ and the more recent hip-spine relationship⁴ must be accounted for. Moreover, the full-body scan allows for measurement of each motion segment in the spine as, for example, lower lumbar segments contribute more to achieve lordosis than upper lumbar segments. The cumbersome task of measuring various radiographic parameters will soon be automated by artificial intelligence and machine learning technologies.⁵

• Conflict of Interest: The author has nothing to disclose.

REFERENCES

- 1. Park PJ, Hassan FM, Ferrer XE, et al. The posterior cranial vertical line: a novel radiographic marker for classifying global sagittal alignment. Neurospine 2023;20:790-7.
- 2. Kim YC, Cui JH, Kim KT, et al. Novel radiographic parameters for the assessment of total body sagittal alignment in adult spinal deformity patients. J Neurosurg Spine 2019;31:
- 3. Schwab F, Lafage V, Patel A, et al. Sagittal plane considerations and the pelvis in the adult patient. Spine (Phila Pa 1976) 2009;34:1828-33.
- 4. Chavarria JC, Douleh DG, York PJ. The hip-spine challenge. J Bone Joint Surg Am 2021; 103:1852-60.
- 5. Schwartz JT, Cho BH, Tang P, et al. Deep learning automates measurement of spinopelvic parameters on lateral lumbar radiographs. Spine (Phila Pa 1976) 2021;46:E671-8.