Can we always trust in the computer? Adequate tibial alignment and flexion-gap balancing using personalised knee arthroplasty cutting blocks

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To the Editor,

Patient-individualised cutting blocks have drowned the market of total knee arthroplasty (TKA), promising not only faster but even easier surgical success after adequate planning [1–4]. The authors want to discuss how to adequately achieve and improve tibial alignment and flexion gap balancing using the patient individualised TruMatch total knee arthroplasty system (Johnson & Johnson, New Brunswick, NJ, USA). In case of straightforward surgery according to the TruMatch cutting blocks, the authors achieved excellent radiological and anatomical intraoperative results but faced significant flexion gap instability. Therefore, before performing the tibial cut using the TruMatch system the authors recommend double-checking the axis with the conventional alignment tower. In addition, the authors apply the femoral TruMatch cutting block and test its position with respect to adequate flexion gap balance and rotation using the Ranawat block [5]. After adjustment with the tibial alignment tower and the Ranawat block, not only appropriate cutting to the anterior femoral cortex, as measured using the TruMatch system, but also a well-balanced flexion gap can be achieved. We believe that surgeons should always double check patient-individualised cutting blocks using their conventional guides and hope that this letter will assist other knee surgeons in doing so. When using patient individualised cutting blocks, surgeons should avoid a straightforward application of these tools without critical verification, which might on the other hand counter the claimed time reduction.

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