



**ESPS PEER REVIEW REPORT**

**Name of journal:** World Journal of Orthopedics

**ESPS manuscript NO:** 9770

**Title:** The choice of CT vs MRI for modeling of patient-specific instrumentation in total knee arthroplasty: a review of current evidence.

**Reviewer code:** 02444800

**Science editor:** Ling-Ling Wen

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CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> Existing	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair		BPG Search:	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Existing	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

**COMMENTS TO AUTHORS**

Well researched and presented paper on a very relevant topic. Adds to the current knowledge. The statistics are well presented. Few suggestions: 1. You state in the Intro that PSI evolved to reduce malalignment and rotation. This is incorrect with reference to the femur where the distal cut (the only cut made with help of PSI) has no relation to femoral rotation; which still needs to be determined by the surgeon depending on balancing technique. 2. Established accuracy standards for alignment exist only with respect to the coronal plane. Currently available technology too allows for attainment of precision mainly in the coronal plane. Computer navigation has the ability to provide intra-operative feedback for component alignment in all planes. However it does not allow for verification, as it is limited by the surgeon's intra-operative marking of points. The authors accept the limitations well, but the above facts might be worth evaluating. The relevance is that when we have various methods to increase accuracy, are we achieving much more with PSI than with previously existing technology at all? 3. In the discussion regarding resource allocation for use of PSI, it is relevant to also recognise that there is some waiting between the imaging and availability of PSI from the manufacturer. When the PSI eventually arrives, their shelf-life is short, due to the fact that bony anatomy might continually change in the evolving arthritic process. Both patients and schedulers have to hence take into account that there is a relatively narrow window period during which the operation must then be undertaken.