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REVIEWER'S REPORT

Manuscript No.: IJAR-53497 Date: 21/08/2025

Title: Pre-operative determination of intramedullary nail length in tibia by anthropometric measurement-a prospective study

Recommendation:
✓ Accept as it is .....
Accept after minor revision.....
Accept after major revision .....
Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity		✓		
Significance	✓			

Reviewer Name: Dr. S. K. Nath Date: 22/08/2025

Reviewer's Comment for Publication:
The study concludes that anthropometric measurements, notably the TT-MM and TT-A distances, are reliable, simple, and cost-effective predictors of tibial nail length preoperatively. They have the potential to reduce intraoperative radiation exposure, operative time, and overall healthcare costs, making them particularly valuable in settings with limited resources. These findings align with prior literature and support broader application in orthopedic surgical planning.

Reviewer's Comment / Report

Strengths:
- **Focus on Non-Invasive, Cost-Effective Method:** The study emphasizes preoperative anthropometric measurements as an accessible alternative to intraoperative techniques, which can reduce radiation exposure and operative time.
- **Strong Correlation Data:** High correlation coefficients (e.g., $r > 0.86$) between specific measurements (TT-MM and TT-A distances) and intraoperative nail length support the reliability of these parameters.
- **Universal Applicability:** The study reports no significant variation in the measurement correlations across different demographic groups (age, sex), suggesting broad applicability.
- **Clinical Relevance:** Findings could improve surgical planning, especially in resource-limited settings lacking advanced imaging facilities.

Weaknesses:
- **Sample Size:** The sample included only 40 patients, which may limit the generalizability of results; larger studies are needed to validate these findings.
- **Limited Demographic Data:** The demographic diversity of the sample (e.g., body habitus, ethnic backgrounds) isn't extensively detailed, which could impact applicability across populations.
- **Measurement Variability:** The study relies on manual measurements using a metallic tape, which can be prone to inter- and intra-observer variability unless standardized precisely.
- **No Comparative Analysis with Existing Techniques:** While the study mentions intraoperative measurements as standard, it does not compare anthropometric predictions directly with fluoroscopic methods' accuracy.