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Shifting to an App-Based Method of Preoperative Templating in Orthopaedic Surgery

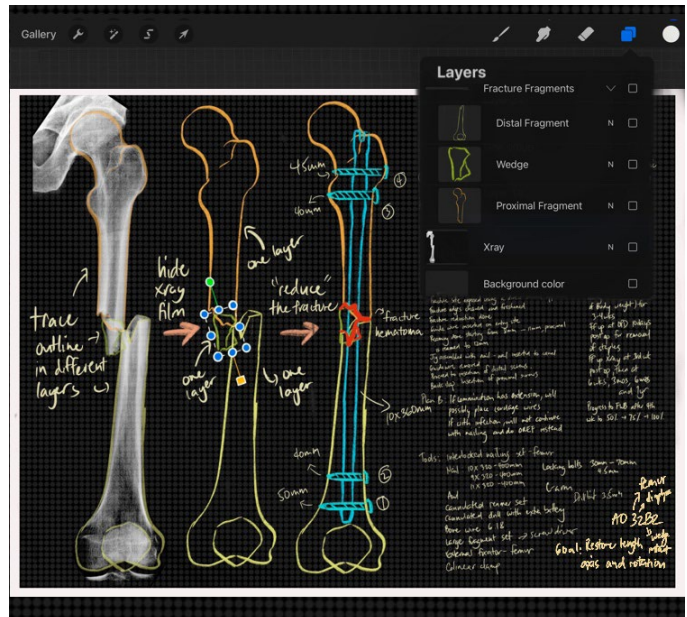
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Purpose: The study will clarify if there are differences between conventional and digital preoperative templating for the resident trainee.

Methods: A retrospective study involving residents (n = 12) under the Department of Orthopaedics and Traumatology was conducted. The residents were divided into two groups: Group A (n = 6) assigned to do conventional template, Group B (n = 6) performing digital template. After doing their assigned work, the subjects cross over into the other task and the process starts over. Conventional templates are scored using the AO guidelines of template completeness. Digital templates are evaluated using image-based surgery planning. Each subject in both groups completed templates for three injury patterns: AO 2R2A3/2U2C2, 32B2, and 43C2. Wilcoxon signed rank and binomial tests (5% level of significance) were used as statistical tools.

Results: A total of 12 residents (10 male, 2 female; median age 31 years [range, 28-34]) participated in the study. Five first-years (4 male, 1 female), 4 second-year residents (3 male, 1 female), 2 third-year residents (2 male), and 1 fourth-year resident (1 male) were divided into two groups with equal sizes. Template processing, fracture classification, and plan elaboration were comparable with good interobserver and intraobserver reproducibility using the Wilcoxon signed ranks test with all z values below 1.96 and $P > 0.05$. There was no significant difference in the evaluation scores used for either exercise, whether doing a traditional standard template or the digital template ($P > 0.05$).

Conclusion: The study shows that shifting to an app-based method of preoperative digital templating can achieve the standard goals performed in traditional, paper-based practice. With an electronic platform for radiography, digital templating is an alternative manner to appreciate fracture configurations, reduction, and fixation for fracture surgery.



The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or medical device he or she wishes to use in clinical practice.