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ANGLE ORTHODONTIST
An International Journal of Orthodontics and Dentofacial Orthopedics
79th Anniversary   1930-2009
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Predicting soft tissue changes in mandibular advancement surgery: A comparison of two video imaging systems

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ABSTRACT

The purpose of this study was to evaluate the accuracy of two video imaging systems, Prescription Portrait and Orthognathic Treatment Planner, in predicting the soft tissue profiles of 39 patients who underwent mandibular advancement surgery. Presurgical cephalograms and profile photographs were entered into a computer. Computerized cephalometric line and video image predictions were generated and compared with the actual postsurgical results. The results indicate that both programs were equally accurate clinically in their line drawing and video image predictions. In the line drawings, clinically acceptable accuracy was shown in approximately 80% of the upper lip and chin predictions and in less than 50% of the lower lip predictions. The video images produced by both programs received fair to good ratings from a panel of professional and lay judges. Orthodontists and surgeons rated all aspects of the images similarly, while lay people were most critical of the chin and submental areas and least critical in their overall evaluation.

KEY WORDS: Video imaging, Prediction, Orthognathic surgery.