The Online
ANGLE ORTHODONTIST
An International Journal of Orthodontics and Dentofacial Orthopedics
79th Anniversary 1930-2009

The Angle Orthodontist: **Vol. 68, No. 5, pp. 401–408.**

An evaluation of two VTO methods

Lew B. Sample, DMD;[a, b] P. Lionel Sadowsky, DMD, BDS, DipOrth, M Dent;[c] Edwin Bradley, PhD[d]

[a]Dr. Lew B. Sample, 1705 Vestavia Parkway, Birmingham, AL 35216, E-mail: LBMNS@aol.com

[b]Lew B. Sample, graduate student, Department of Orthodontics, University of Alabama at Birmingham.

[c]P. Lionel Sadowsky, professor and chairman, Department of Orthodontics, University of Alabama at Birmingham.

[d]Edwin Bradley, professor, Department of Biostatistics, University of Alabama at Birmingham.

ABSTRACT

A sample of 34 growing Class II patients was used to assess the reliability of manual and computer-generated visual treatment objectives (VTOs) when compared with the actual treatment results. Skeletal, dental, and soft tissue measurements were performed on the VTO and on the posttreatment tracings. Using paired *t*-tests and Pearson correlation coefficients, comparisons were made between the VTO and posttreatment tracings. Both the manual and computer VTO methods were accurate when predicting skeletal changes that occurred during treatment. However, both methods were only moderately successful in forecasting dental and soft tissue alterations during treatment. Only slight differences were seen between the manual and computer VTO methods, with the computer being slightly more accurate with the soft tissue prediction. However, the differences between the two methods were not judged to be clinically significant. Overall, the prediction tracings were accurate to only a moderate degree, with marked individual variation evident throughout the sample.

KEY WORDS: Visualized Treatment Objective, Prediction tracing, Cephalometrics, Growth forecast, Correlation coefficient.

Submitted: June 1997
Accepted: December 1997.