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## Predicting soft tissue profile changes concurrent with orthodontic treatment

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### ABSTRACT

Two studies related to soft tissue profile change, are reported in this paper.

In the first study, 50 adults with normal occlusion were compared to 50 adults with maxillary protrusion. Cephalometric radiographs were obtained for all subjects in two positions: with lips relaxed and lips closed. The amount of lower lip movement increased in relation to the degree of maxillary protrusion. In both groups, thickness of soft tissue pogonion decreased with upward movement of the lower lip.

In the second study, 20 posttreatment patients were examined to determine how soft tissue profile is related to the morphologic alterations of treatment. Ten patients were treated for maxillary protrusion and 10 for bimaxillary protrusion. Upper lip retraction was about 40 percent of the maxillary incisor retraction. Cases with maxillary protrusion showed slightly less soft tissue change than cases with bimaxillary protrusion. Lower lip retraction was about 70 percent of the maxillary incisor retraction.

With an understanding of pretreatment lip posture and data related to the soft tissue response to treatment, a framework is presented for predicting a patient's posttreatment facial profile.

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