

Supplementary Material

Malocclusion Classification

The most common current skeletal classification is based on the position of the maxilla and mandible relative to the anterior cranial base in the sagittal plane [A]. This classification is based on the results of the cephalometric analysis. When both the maxilla and mandible are in positions that are within the normal range of the existing cephalometric measurement normative values, close to the position of the anterior cranial base in the sagittal plane, there is no skeletal malocclusion, and the skeletal classification is Class I (orthognathic). When the maxilla is in a more anterior position and/or the mandible is in a more posterior position in relation to the anterior cranial base, the resulting skeletal malocclusion is classified as Class II, commonly described as “retrognathic” or “overbite”. When opposite relationships exist, with the maxilla in a more posterior position and/or the mandible in a more forward position in relation to the anterior cranial base the resulting malocclusion is classified as Class III, often described as “prognathic” or underbite.

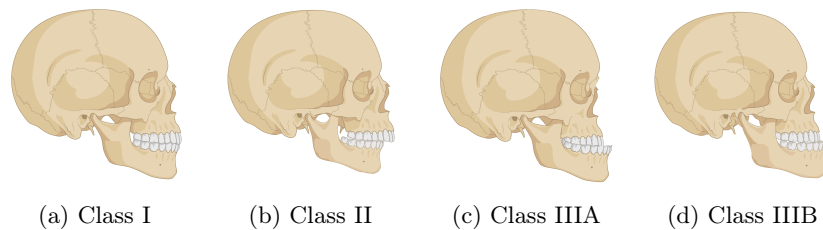


Fig.S1: Craniofacial malocclusion classes

The Class III classification was expanded into two subgroups to more accurately describe the skeletal discrepancy with the use of two separate classifications, depending on the etiology of malocclusion: a Class IIIA classification to describe the cases where the more posterior position of the maxilla is the main contributing factor to the malocclusion, and a Class IIIB classification to describe the case where a more anterior position of the mandible is the main component. This subclassification is clinically significant and contributes to treatment planning decisions. In the case of Class II, the differential diagnosis related to the contribution of either jaw in the skeletal discrepancy is not as clinically critical, and, therefore, no Class II subgroups were created.

[A] Tang, E. L. K., & Wei, S. H. Y. (1993). Recording and measuring malocclusion: a review of the literature. *American Journal of Orthodontics and Dentofacial Orthopedics*, 103(4), 344–351.