

Supplementary Figure 1. American Board of Orthodontics measuring gauge.

	Alignment	Marginal ridge	Occlusal contact	Interproximal contact	Buccal overjet
Acceptable group	≤ 1.0 mm discrepancy	≤ 1.0 mm discrepancy	Contact with opposing arch	Contact with adjacent teeth	Normal buccal overjet
Unacceptable group			Not applicable	as good	

Supplementary Figure 2. Classification criteria for occlusal state of the mandibular third molars. The measurements are scored according to the American Board of Orthodontics (ABO) objective grading system using an ABO measuring gauge. Alignment: mesiodistal central groove of the mandibular first molar (L6) and third molar (L8) shall be within 1.0 mm in the same plane. Marginal ridge: marginal ridge of L6 and L8 shall be within 1.0 mm of the same level. Occlusal contact: buccal cusp of the L8 and lingual cusp of the maxillary molar should contact the occlusal surfaces of the opposing teeth. Interproximal contact: there should be no space between L6 and L8. Buccal overjet: buccal cusp of the L8 should contact the center of the occlusal surfaces of the maxillary molar, buccolingually. Each sample is classified into the acceptable group only when the tooth satisfies all the five criteria. Otherwise, the sample is classified into the unacceptable group.

Development of the tooth				
1. Presence of follicle		6. Crown fully formed	3,	
2. Initial calcification		7. One-third of root formed	3	
3. One-third of crown formed		8. Two-thirds of root formed	*	
4. Two-thirds of crown formed		9. Root almost formed	1	
5. Crown almost fully formed		10. Closed apex	P	

Supplementary Figure 3. Nolla developmental stages.