

Supplementary Figures

Patient 1



Patient 1. **Top row** shows intra oral photographs of a 16-year-old female patient with a left posterior crossbite involving a teeth segment from left lateral incisor to second premolar. **Second row**, shows an initial NiTi wire with a 6 mm step-up bend fully engaged to brackets of those blocked-out left maxillary teeth segment to intrude and disengage them as initial step. Mandibular .016"X.022" NiTi archwire with intrusive V-bends, and composite build-up placed on the left molar enhanced disengagement. **Third row**, During-treatment images showing the halfway jump of the affected canine and premolars, before removing the composite. **Fourth row**, Shows post treatment intraoral photographs after 7months of treatment.

Patient 2



Patient 2. **Top row** shows pretreatment models of a 14-year old female patient with a severe skeletal class III (7mm under jet), and bilateral posterior crossbite. Treatment plan called for mandibular first premolars extraction, and consolidating the existing spaces, using V-Bent 0.016"X.022" NiTi, archwires which disengaged incisor teeth without bite raisers, and later stainless steel archwires, allowed retraction of the mandibular incisor teeth. The V-bends activation of archwires while retracting mandibular incisors helped their bodily translation. **Middle Row** shows final stage of treatment. With both bilateral crossbite and class III malocclusion corrected. **Third row** shows post-treatment intraoral photographs 3 years after retention. The post treatment panoramic and cephalometric radiographs show no root resorption.

Patient 3



Patient 3. Top Row shows intraoral pretreatment photographs of a 14 year-old female patient with a right unilateral posterior crossbite, anterior crowding, and class III cuspids relation. Treatment called for four premolar extractions and crossbite correction. **Second Row**, After alignment the interlock, the composite build-ups on mandibular molars enhanced by the V-Bends on maxillary and mandibular 0.016"X0.022" NiTi archwires disengaged posterior teeth. **Third Row** shows the correction of cross bite and class III relations have been achieved at the finishing stage. **Bottom Raw** shows the post treatment photos using this technique.

Patient 4



Patient 4. First row, intraoperative pretreatment photographs of a 14-year female patient with severe left side posterior cross bite and deep class III malocclusion. Second row shows the use of composite build-ups and the V-Bent NiTi archwires disengaged posterior and

anterior teeth on both side, and facilitated correction of the massive crossbite and class III relations. **Third raw** shows post treatment photos. **Fourth raw**, pre and post treatment cephalometric radiographs showing improved incisal relation without roots resorption.

Patient 5



Patient 5. **Top raw;** pre treatment intra oral photos of a 15-year-old female patient with total right unilateral posterior cross bite and class III malocclusion. **Second row;** the intrusive effects of the V-bent 0.016"X.022" NiTi archwires disengaged anterior and posterior teeth in the right side without composite build-ups, allowing effective transverse forces of activated archwires to correct this massive crossbite and the class III relation as well. **Bottom row:** shows the post treatment intra oral photos.

Patient 6



Patient 6. **Top Row** showing pretreatment intraoral photographs of a 13-year old female patient with a bilateral cross bite and class III tendency. Nonextraction treatment was performed using the V-Bend technique as usual. **Bottom Row** showing post treatment photographs.