

***The Carriere® Motion™
Class III Appliance***



Presentation Outline

1. The Foundation of the *Motion* Class III Appliance
2. Current Solutions in the Market
3. The *Motion* Class III Appliance
 - i. Product Overview
 - ii. Product Details
 - iii. Part Numbers
4. Usage Instructions

The Foundation of the *Motion* Class III Appliance

- **The *Motion* Class II Appliance:** For nearly a decade, clinicians, staff, and patients have benefited from its ease of use, speed, and efficacy compared to any other product on the market
- The *Motion* Class III Appliance is built on the same biomechanical principles as the *Motion* Class II Appliance
 - Remarkable results using the *Motion* Class II Appliance on Class III cases
 - We have developed an ideal appliance specifically for Class III treatment



The Class III Malocclusion

- **Class III Malocclusion:** The mesio-buccal cusps of the maxillary first molars lie posteriorly to the mesio-buccal groove of the mandibular first molar.



Dental Class III



Skeletal Class III

- **Prevalence:** Between 5-10% of total cases, depending on ethnic makeup of patient base. Approximately 20-30 cases per year.
- Poses significant treatment challenge to orthodontists and patients.

Class III Malocclusion



Class III Malocclusion



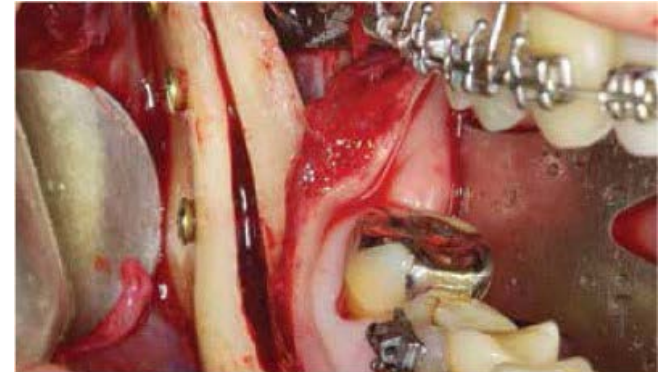
Class III Malocclusion



Current Class III Treatment Options: Surgery

- 1) From Doctor's Perspective
 - i. Angst associated with sending patients to surgery
 - ii. Labor intensive
 - iii. Long, drawn out multi-phased treatment

- 2) From Patient's Perspective
 - i. Trauma and risks of surgery
 - ii. Long recovery period
 - iii. Cost



More than 80% of patients cannot or will not accept surgery.

Current Class III Treatment Options: The Facemask

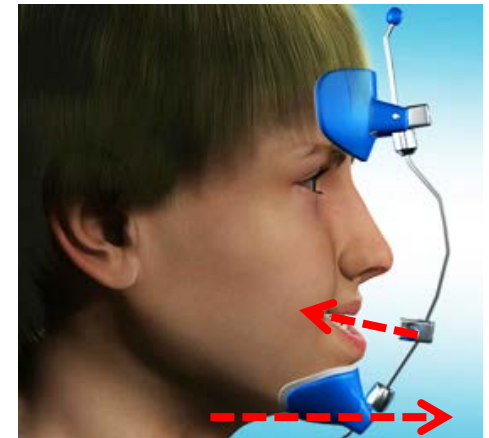
1) From Doctor's Perspective

- i. Costly/labor intensive
- ii. Unpredictable- treatment is 100% reliant on patient compliance
- iii. High maintenance (issues with patient and parents)
- iv. End results are frequently less than satisfactory
- v. Not recommended for adult patients



2) Patient's Perspective

- i. Traumatic- heavy forces are painful
- ii. Unsightly
- iii. Uncomfortable/sleep issues



Introducing A Remarkable Breakthrough: The *Motion* Class III Appliance!

A highly efficacious, profitable,
and patient-friendly solution for
Class III treatment!



The Motion Class III Appliance

An elegant and minimally invasive solution for:

- Treating dental Class III cases to a balanced and optimal Class I occlusion
- Treating a high percentage of skeletal Class III cases to a Class I occlusion (for patients whom do not want surgery)
- Treating lower anterior crowding at the beginning of treatment (w/o brackets)



Motion Class III Appliance

Key Features and Benefits – Doctor and Staff

- A simple, direct bonded appliance
- Less than 15 minutes to measure and place
- Easy to teach patients to use
- Unlike surgery or face masks, very few issues w/emergency appointments, patient complaints, etc.
- Low cost vs. surgery or face mask
- Predictable
- Fast
- Patient friendly



A *DRAMATICALLY* better solution than anything currently available!

Motion Class III Appliance

Key Features and Benefits – Patients and Parents

- Comfortable
- Discreet
- Inexpensive
- Fast
- Effective



Motion Class III Appliance: Key Design Features

- Special heat-treated stainless steel provides multi-lateral flexion at both center and distal segments to closely fit the patient's anatomical structure. Designed to upright lingually-inclined molars when torque is applied. **Note: Bond cuspid first.**
- Conveniently-placed vertical seating groove on molar pad to facilitate easy and accurate placement
- Patented pad design with tapered undercut provides optimal mechanical retention to prevent unscheduled debonds caused by lateral or vertical forces

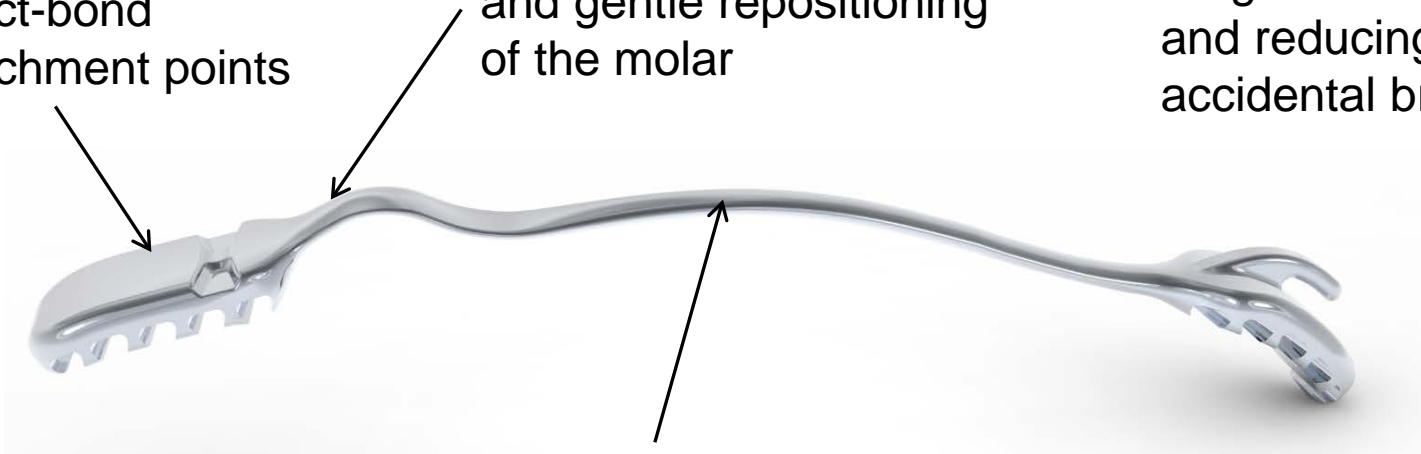


Summary of Key Features and Benefits

Simple, reliable
direct-bond
attachment points

Multi-lateral flexion at the
center and distal
segments, allowing a
custom anatomical fit
and gentle repositioning
of the molar

One-piece Metal
Injection Molded
stainless steel body
for greater strength,
and reducing
accidental breakage

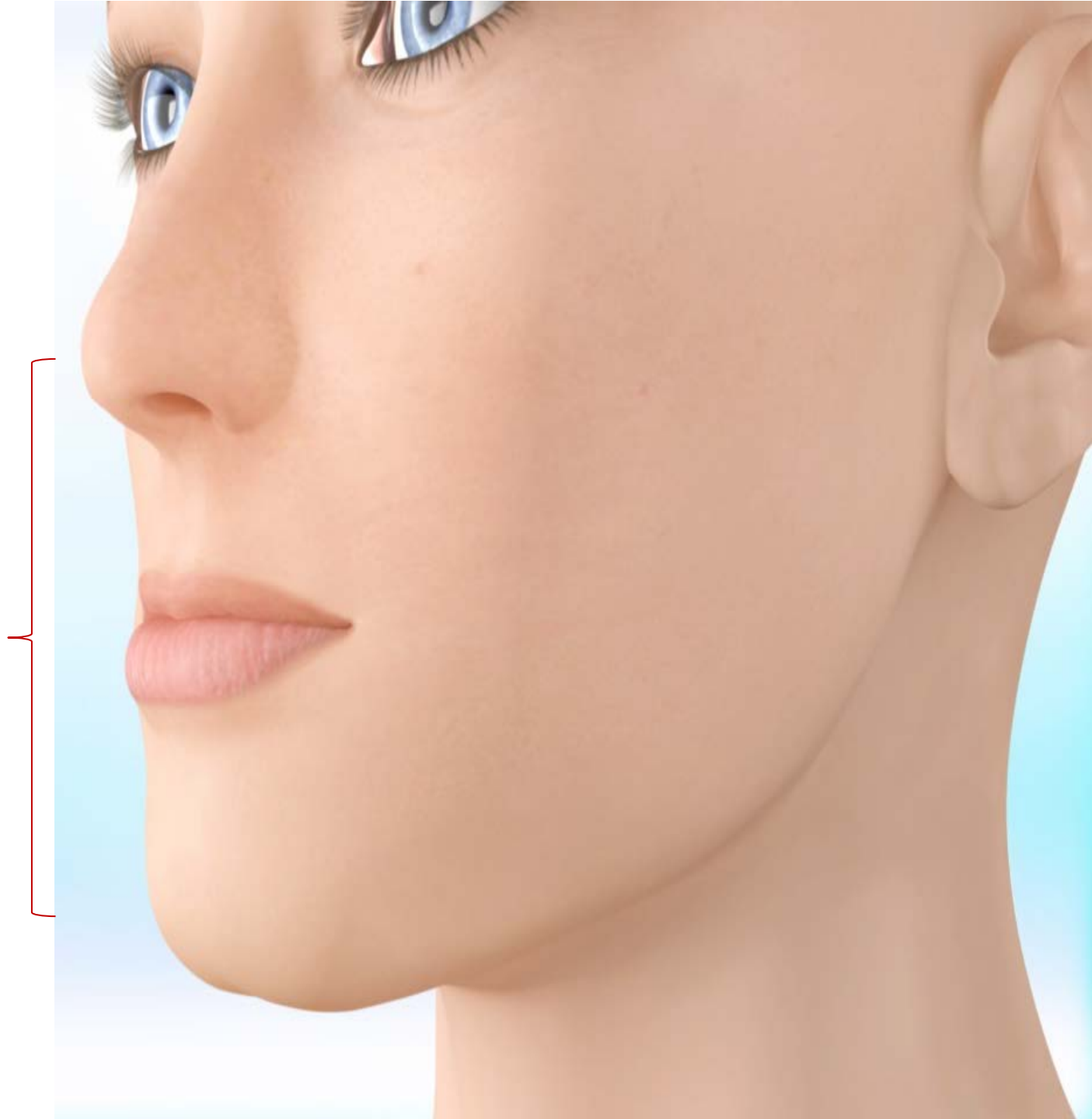


No springs, push
rods, bands, or
crowns to complicate
matters for you, your
staff, or your patients

Specialized heat
treatment for high
flexibility and unique
spring-back qualities to
resist deformation

Universal (L/R)
appliance in six sizes,
color-coded for easy
identification and
inventory

Pre-Treatment:
Class III mandibular
protrusion and mid-
facial deficiency



Pre-treatment:
Malocclusion causing
imbalance in skeletal and
dental relationship



Placement: Streamlined and non-invasive appliance contours to patient's dental anatomy. Essix retainer & buccal tube as anchorage.



Treatment: A Class I platform achieved in only 3-4 months using only Force 1 or Force 2 elastics



Treatment Cont.: Brackets are placed to finish the case. Leveling and alignment using gentle forces and arch expansion to natural position.



Treatment: Composite buildup
on 1st molars open bite to
facilitate AP



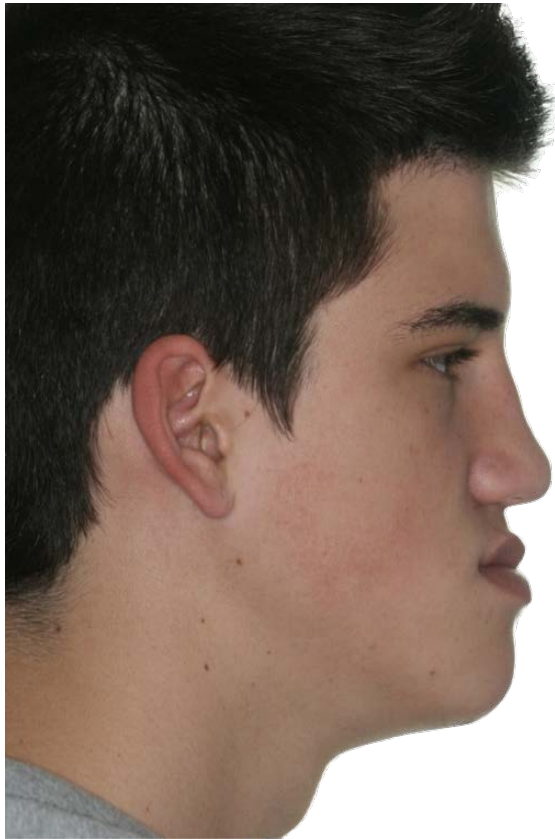
Finished Treatment: Proper occlusion, straight teeth, and....



.....balanced profile and facial harmony



Class III Patient Case #1



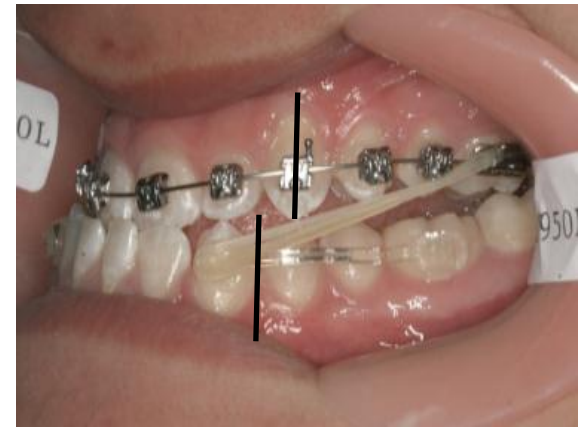
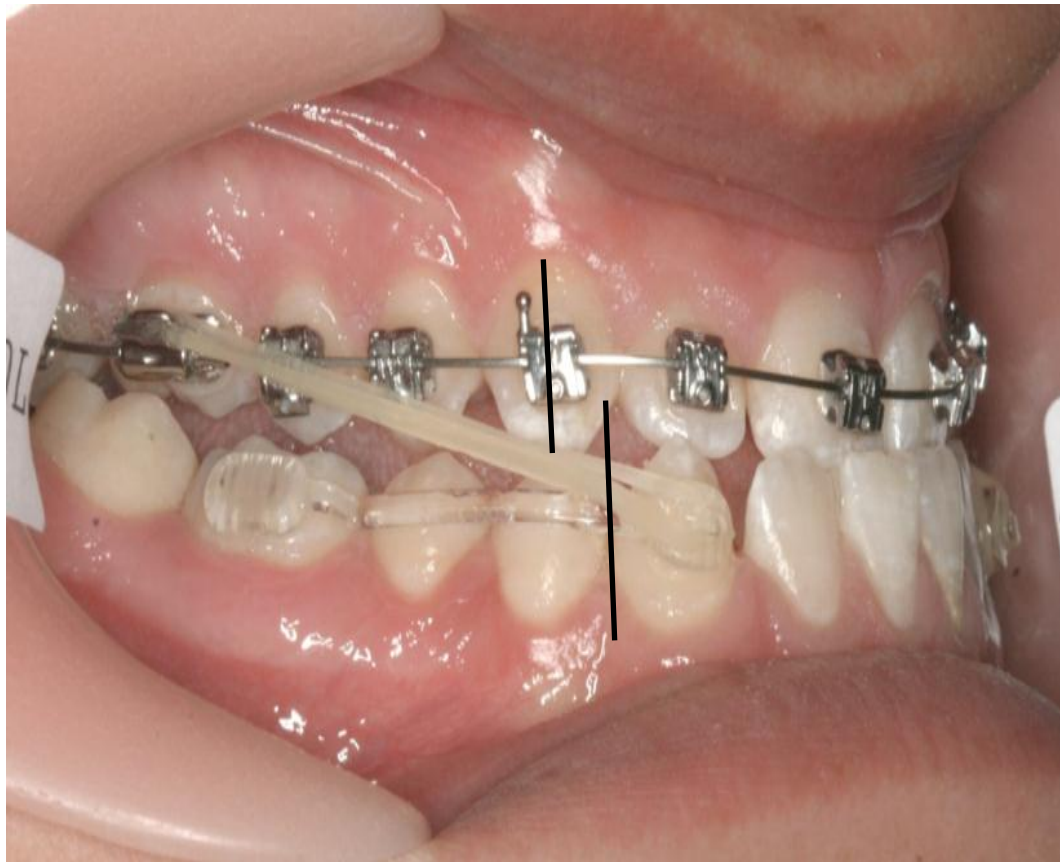
Age 18 years



Severe skeletal Class III and unilateral posterior crossbite. Parents refused surgical option.

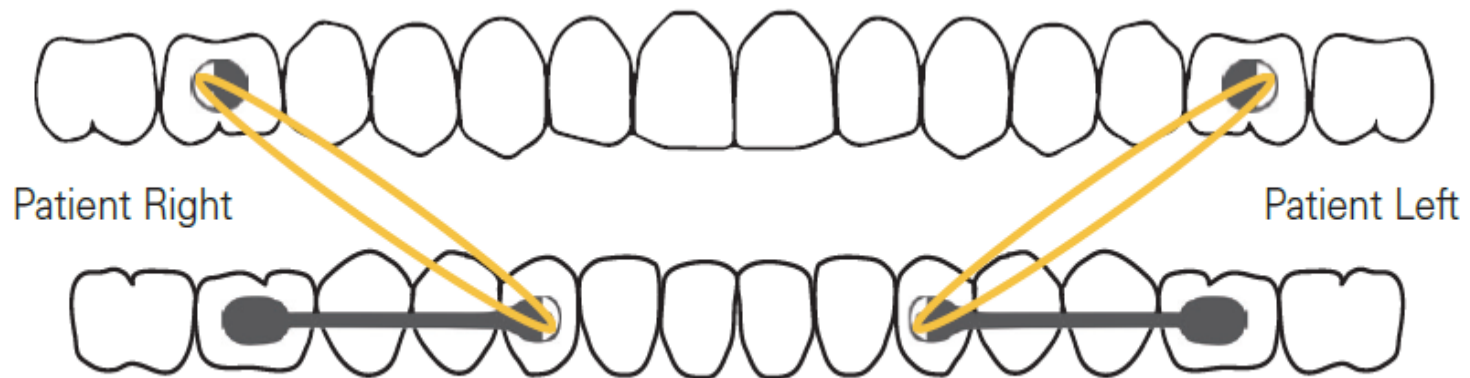


Brackets placed on upper arch to level and align.

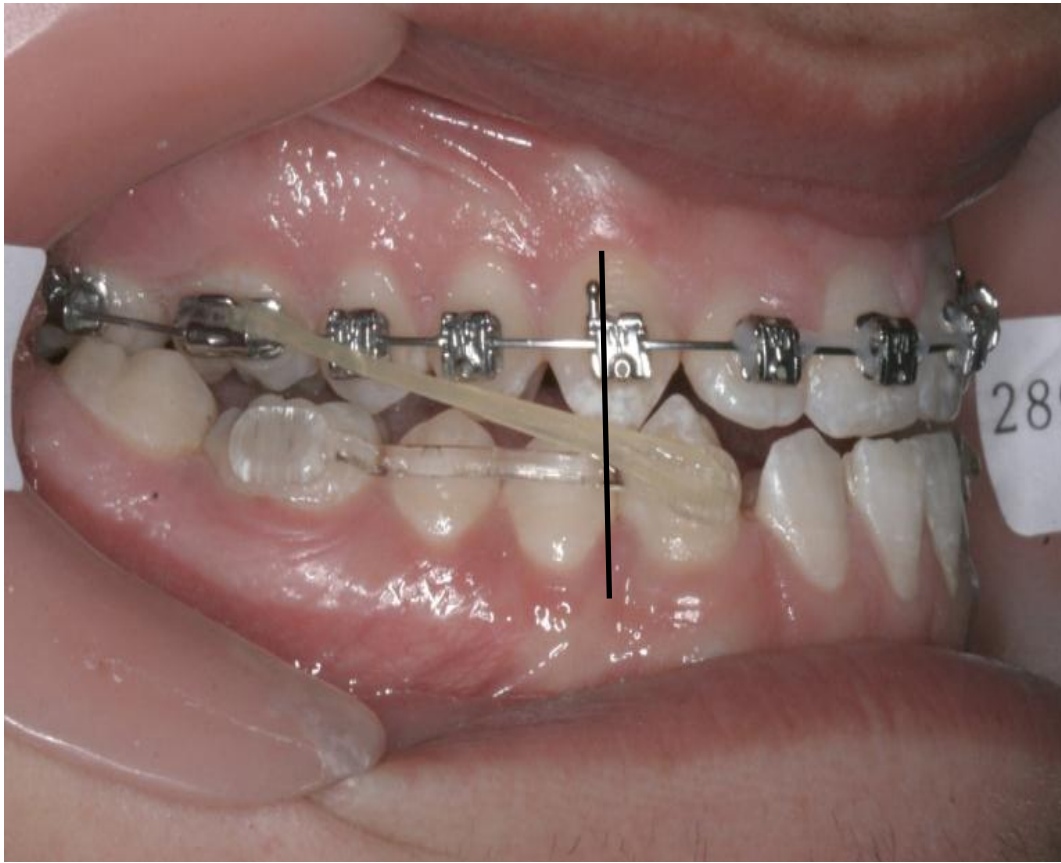


Initial placement of *Motion*. No anchorage required due to the need for maxillary anterior protrusion. Note: A clear *Motion* prototype was used to prove concept.

Elastics Protocol: *Motion* Class III Appliance placed L3 to L6 with buccal tube on U6



Protocol: Force 1 (6oz 1/4") following placement and throughout treatment.



Canine Class I achieved. Note improving occlusal plane angle.



Level and align with *Carriere Cu Nitantium*® wires. Patients UR posterior in crossbite.



Working phase: Express torque and continue to correct curve of spee.



Transforce[®] used for maxillary width expansion.

2.5 months of *Carriere* SLB+ *TransForce*®



Molars and cuspids in excellent position, unilateral posterior crossbite corrected, good anterior torque expression. **Note, *virtually no bends in the wires!***



Final result. No surgery, face mask, or extractions.



Pre-Tx



Post-Tx



Mid-facial
deficiency

Pre-Tx



Post-Tx



Pre-Tx



Post-Tx



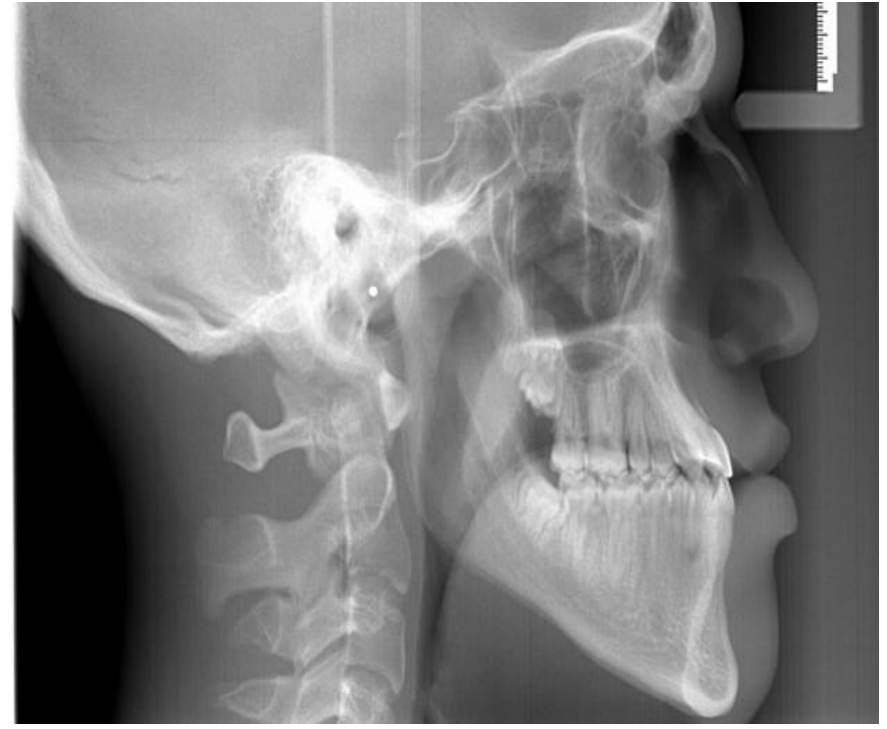
Pre-Tx



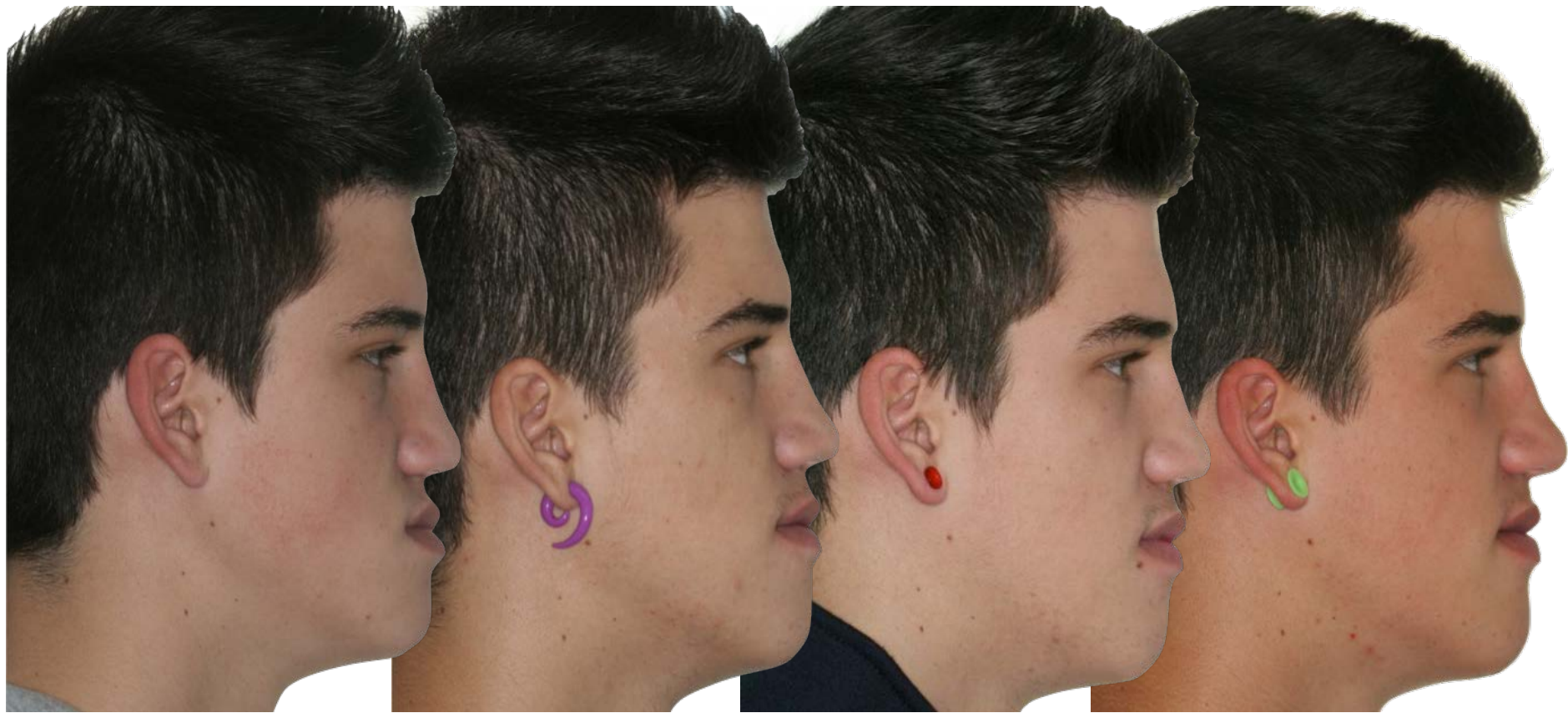
Post-Tx



Pre-Tx



Post-Tx



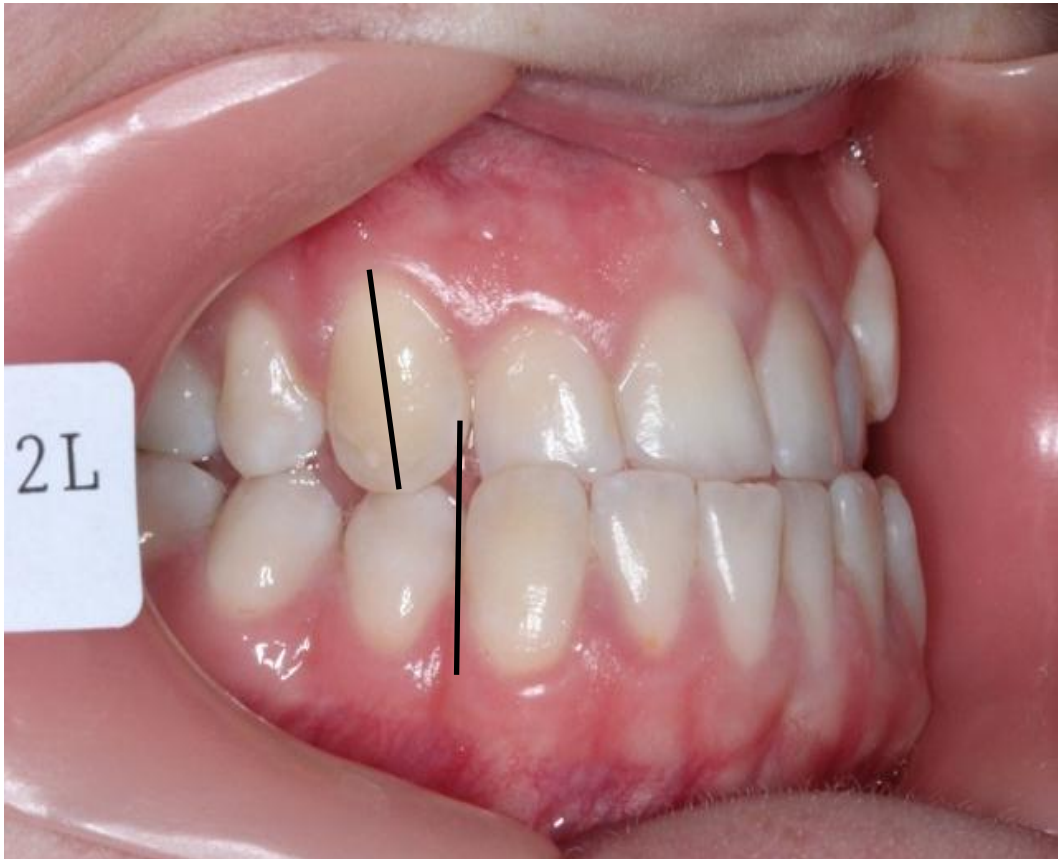
Pre-Tx

Post-Tx

3 years Post-Tx

5 years Post-Tx

Class III Patient Case #2



Pre-Tx

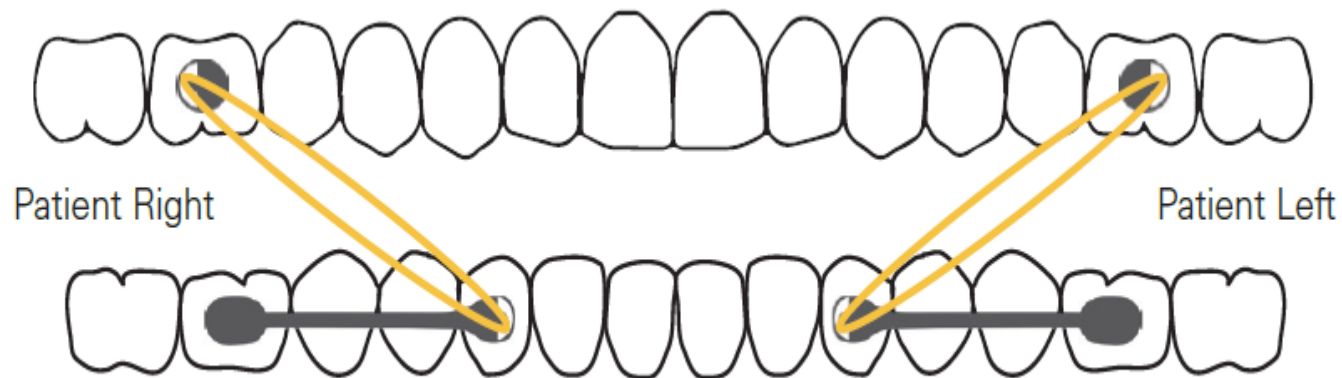


Pre-Tx

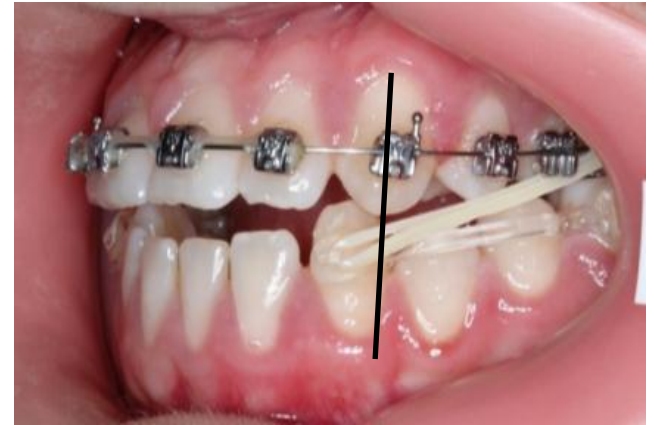
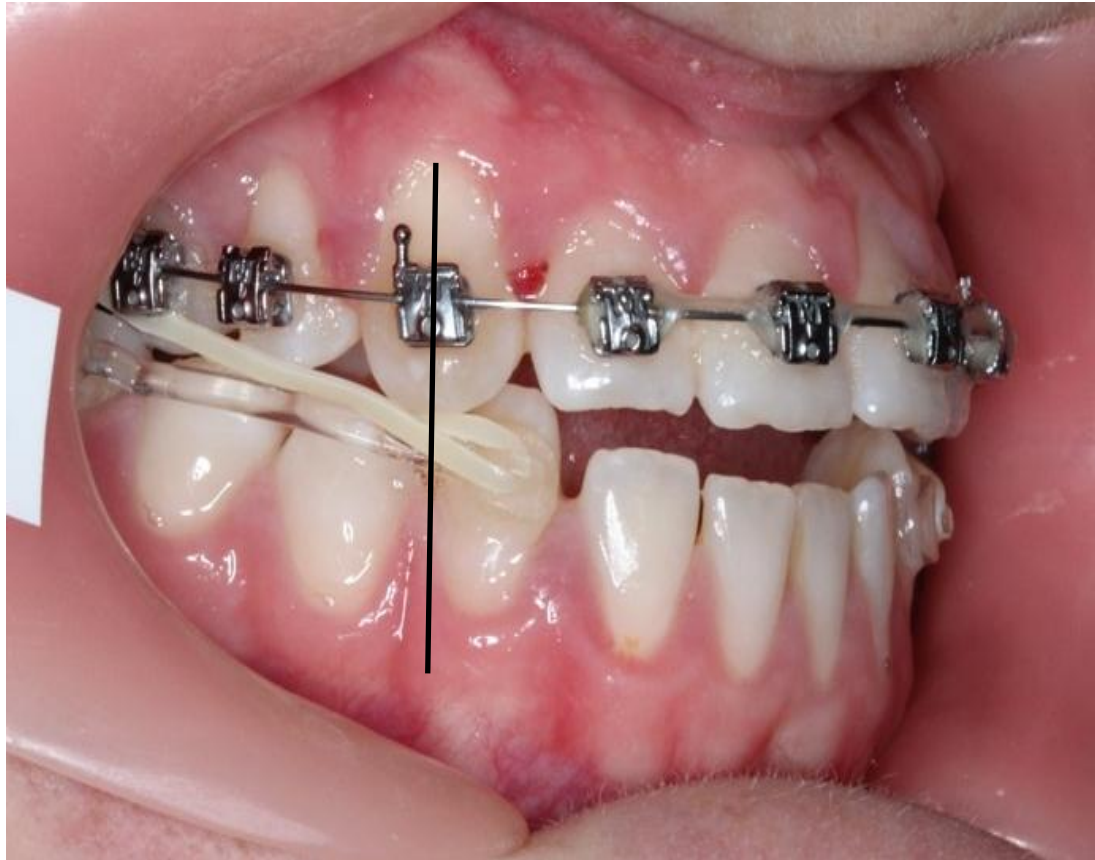


Initial placement with leveling and aligning the upper arch. Note: A clear *Motion* prototype was used to prove concept.

Elastics Protocol: *Motion* Class III Appliance placed L3 to L6 with buccal tube on U6



Protocol: Force 1 (6oz 1/4") following placement and throughout treatment.



After 4 months using *Motion*

Nice space opening between the lower 2 and 3, along with a Canine Class I relationship.



Motion removal with leveling and aligning of the lower arch with ongoing working phase of the upper arch.



Finishing phase with space consolidation.



Beautiful finished occlusion without extractions or surgery.

Class III Treatment Costs

Solution	Product Cost	Orthodontic Treatment Time / Cost*	Total Treatment Cost
Surgery	\$15K-30K+	2 hours: Consult with patient & oral surgeon	\$15K-30K
Facemask	\$100	2 hours: Patient consultation and training	\$700+
<i>Motion</i> Class III Appliance	\$164	<1 hour: Patient consultation, placement	\$400

*Assumption: Blended \$300 hourly rate for office/staff

Competitive Advantages for the Orthodontist & Staff

Product Characteristic	Surgery	Face Mask	<i>Motion Class III Appliance</i>
Cost-effective	No	No	Yes
Non-invasive	No	No	Yes
Reliant on Patient Compliance	High	High	Low
Patient Acceptance Rate	Low	Low	High
Fast	No	No	Yes
Ease of Treatment	NA	No	Yes

Advantages for the Patient

Product Characteristic	Surgery	Face Mask	<i>Motion Class III Appliance</i>
Discreet	No	No	Yes
Comfortable	No	No	Yes
Cost-effective	No	Yes/No	Yes
Non-invasive	No	No	Yes
Painful	Extremely	Yes	No
Fast	No	No	Yes

Clinical Advantages

- The *Motion* Class III Appliance installs in minutes, and requires no bands, crowns, or lab services.
- Once placed, it works 24/7, unobtrusively, and with minimal patient involvement.
- It requires almost no additional chair time, because there are no separator appointments, no complicated pieces to adjust, no lab cost, and the one-piece design minimizes accidental debonding or breakage.
- Shortens overall treatment time significantly, achieving a Class I platform prior to braces.
- Reduces total time in braces for patients
- Easier for patients. Easier for staff. Easier for clinicians.

What Does This Mean for a Clinician?

- The new norm in treating Class III malocclusions
- Increases efficiency and reduces chair time
- A true “practice-builder”
 - Reduced treatment durations results in greater case acceptances and referrals
 - Simple solution for traditionally difficult Class III cases, especially on those that do not want surgery
 - Increased treatment opportunities

The *Motion* Class III Appliance Offering

Kits			
Carriere Motion Class III Standard Kit (1 set of each 23, 25, 27 mm)		424-407C	
Description/Sizes	Color	Item Numbers 1 pair	Item Number 1 Motion Universal
Carriere Motion Class III 16 mm	White	424-416C	424-416
Carriere Motion Class III 18 mm	Blue	424-418C	424-418
Carriere Motion Class III 20 mm	Pink	424-420C	424-420
Carriere Motion Class III 23 mm	Yellow	424-423C	424-423
Carriere Motion Class III 25 mm	Red	424-425C	424-425
Carriere Motion Class III 27 mm	Green	424-427C	424-427
Accessories			
Typodont Motion Class III with Clear Aligner			631-033DNE
Typodont Motion Class III Maloccluded with Clear Aligner			631-034DNE
Motion Class III 5X Demonstration model			631-433X
Motion Elastics - Force 1, 1/4", 6 oz. (50 packs of 100 elastics)			424-9F1
Motion Elastics - Force 2, 3/16", 8 oz. (50 packs of 100 elastics)			424-9F2

Product Configurations

1. Sets

- Pair of Universal L/R appliances
- Available in six sizes (16, 18, 20, 23, 25, 27mm)

2. Single packs

- Universal L/R available in the six sizes
- Flexibility to accommodate uneven crowding and/or anatomical variances

3. Standard Kit

- 1-set of each 23, 25, 27mm

Motion Class III Instructions for Use

1. Preparation of the Maxillary Arch

- a.** The Motion Appliance will be placed on the mandibular arch. A solid and consistent source of anchorage must be selected to avoid protrusion of the upper incisors.

- b.** Possible sources of anchorage can be selected based on an orthodontist's preference, such as an upper Essix Appliance with direct bonded tubes on upper molars, palatal arch, full-maxillary fixed appliance, or mini-screws. However, the recommended source of anchorage is the upper Essix Appliance (Dentsply Raintree Essix, Sarasota, FL, USA) with direct bond tubes on upper molars.

- c.** The recommended Clear Aligner material is A+ with .040" (1 mm) thickness. If the upper 2nd molars (U7) are available, it is preferred to use them to place the buccal tubes, instead of the 1st molars that will be used to stretch the elastics from the molars to the cuspids or bi-cuspids.

Motion Class III Instructions for Use

2. Appliance Selection

a. Measurements of the Mandibular:

Using a Motion Ruler, which is included with the appliance, measure from the midpoint on the facial surface of the mandibular 1st molar buccal groove (L6) to the midpoint of the facial surface of the mandibular cuspid (L3). The appliance will be bonded from the 1st molar to the cuspid.

In a case when the cuspid is not accessible, measure from the midpoint of the mandibular 1st molar buccal groove (L6) to the midpoint of the 1st bicuspid (L4). The appliance is then bonded from the 1st molar to 1st bicuspid, so that the posterior teeth can move bodily to provide space for the inaccessible lower cuspid.

Measure both sides, as some patients may need a different appliance size on each side.

Motion Class III Instructions for Use

2. Appliance Selection (cont.)

b. Appliance Selections:

Select the correct length *Motion* Appliance for treatment by using the measurement found and described in section 2a. When the measurement is between 2 sizes (i.e. in between 24 mm and 26 mm) select the correct appliance based on the amount of rotation desired.

More molar rotation: select the larger size

Less molar rotation: select the smaller size

Note: This appliance is universal (interchangeable between right and left)

Motion Class III Instructions for Use

3. Prep the Teeth per Your Standard Light-Cure Adhesive Instructions

- a. Clean:** Clean the lower 1st molar and lower cuspid or lower 1st bicuspid using prophy paste.
- b. Rinse and dry:** Rinse teeth thoroughly with water and air dry.
- c. Etch:** Etch the surface of the 1st molar and lower cuspid (or lower 1st bicuspid) as appropriate for the adhesive selected.
- d. Rinse:** Rinse teeth thoroughly with water.
- e. Dry:** Apply a brief air burst to the surface of the etched teeth. Ensure that the entire isolated area is dry.
- f. Prime:** Apply a uniform coating of primer onto the surface of the 1st molar and lower cuspid (or lower 1st bicuspid), for maximum tensile bond strength.

Motion Class III Instructions for Use

4. Placing the *Motion* Class III Correction Appliance

- a. **Adhesive Application:** Holding the Motion Appliance by the arm, dispense a generous amount of light-cure bonding material, covering completely each of the Motion Appliance's pads.
- b. **Placement:** Using tweezers or a locking hemostat, grab the arm of the Motion Appliance to position it onto the teeth. Place the Motion Appliance by aligning both pads onto each tooth surface.
- c. **Light-Cure Step 1:** Start first by positioning the cuspid pad onto the lower mesial third of the crown of the cuspid (or 1st bicuspid). Place some light pressure with a finger near the cuspid pad. Remove excess adhesive around the cuspid pad. Snap cure (2 to 5 seconds) the Motion Appliance's pad on the cuspid, so that the Motion Appliance stays in place properly when light-curing the molar pad.

Motion Class III Instructions for Use

4. Placing the *Motion Class III Correction Appliance* (cont.)

d. Light-Cure Step 2: Place the tips of the tweezers on the Motion Appliance's molar pad Instrument Channel to position the molar pad. Press gently until it becomes in full contact with the vestibular surface of the molar crown. Remove any excess of adhesive around the molar pad. While keeping pressure, proceed to light-cure without releasing the pressure.

e. Light-Cure Step 3: Now that the Motion Appliance is well aligned, complete the light-cure step on the cuspid pad.

Motion Class III Instructions for Use

5. Activation

- a.** Run the elastic from the upper 2nd molar (U7) if available, otherwise from the upper 1st molar (U6) to the lower cuspid (L3) or lower 1st bicuspids (L4).

- b.** To attach the elastic from the upper molar to the cuspid or bi-cuspid: first attach the elastic at the upper 1st or 2nd molar tubes and then stretch and attach it to the hook of the mandibular cuspid of the Motion Appliance.

6. Intraoral Elastic Protocol

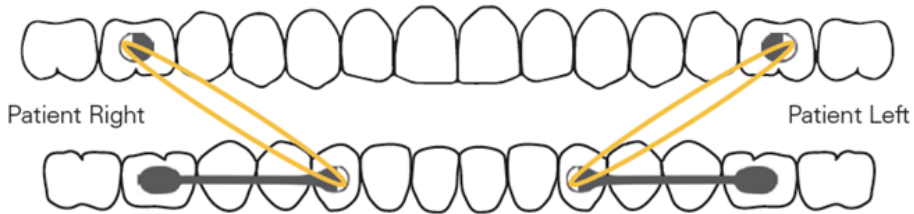
Follow the recommended intraoral elastic protocols per the following slide:

Motion Class III Instructions for Use: Elastics Protocols

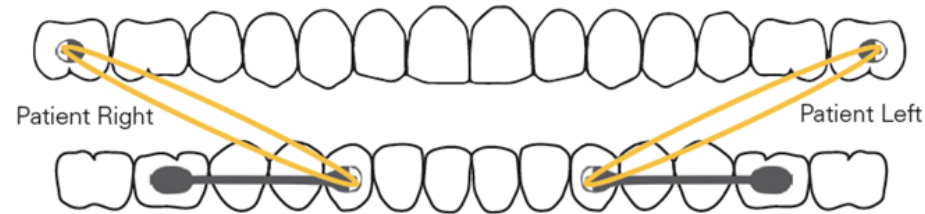
Standard Protocol

- An elastic will run from the lower cuspid to upper molar.
- Use 6 oz, $\frac{1}{4}$ " (Force 1) elastic throughout the treatment

Motion Lower 3 to 6 with Tube on Upper 6*



Motion Lower 3 to 6 with Tube on Upper 7*

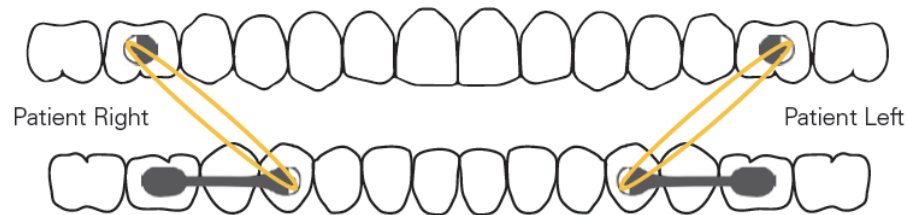


"Shorty" Class III Cases Protocol

Elastic will run from 1st Lower Bicuspid to upper 1st or 2nd molar.

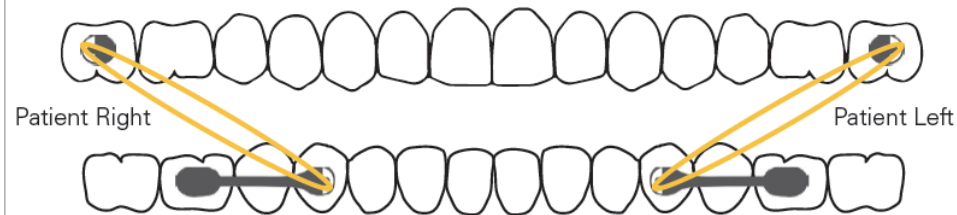
Motion Lower 4 to 6 with Tube on Upper 6

- Use 8 oz, $\frac{3}{16}$ " (Force 2) elastic throughout the treatment



Motion Lower 4 to 6 with Tube on Upper 7

- Use 6 oz, $\frac{1}{4}$ " (Force 1) elastic throughout the treatment



Note: For both protocols, elastics are worn 24-hrs per day, except while eating.

Elastics Selections

- Force 1: 6 oz. 1/4" (424-9F1)
- Force 2: 8 oz. 3/16" (424-9F2)



Motion Class III Instructions for Use

7. Scheduling

Schedule the next appointment 4-6 weeks after placement. Appointment checks at 4-6 week intervals should take only a few minutes. Each appointment is used to observe treatment progress, explain the progress to the patient, praise, and encourage patient's compliance.

8. Removal of the *Carriere Motion* Appliance

- a.** Remove any excess adhesive around the cuspid, or 1st bicuspid molar pad, utilizing a tapered flame burr. A slight concave channel should now be formed around the parameter of the pad.
- b.** Have the patient bite on a cotton roll placed perpendicular to the cuspid or bi-cuspid to provide stability to either the cuspid or bi-cuspid tooth.
- c.** Instrumentation for removal options:
 - i. Bracket Debonding Pliers (PN 204-219).
 - ii. Angulated Debonding Pliers (PN 204-220XL).
 - iii. Micro Mini Pin & Ligature Cutter (PN 204-107 or 107XL Long Handle).

Motion Class III Instructions for Use

8. Removal of the Carriere Motion Appliance (cont.)

- d.** Take one of the recommended removal instruments and place the tip ends at the adhesive interface (concave channel) between the Motion Appliance cuspid pad and the tooth surface. Orient the instrument toward the mesial aspect of the cuspid or bicuspid pad in an occlusal/gingival aspect. Gently squeeze, applying increased continuous pressure, without any twisting or pulling until the bond fails.
- e.** Once the cuspid pad is debonded, have the patient bite on a cotton roll placed in the molar region and then remove the molar pad.
- f.** Take one of the debonding instruments and place it toward the mesial aspect of the molar pad. Gently squeeze the instrument with increased continuous pressure until the molar bond disengages.
- g.** Use a burr or adhesive removing pliers (PN 204-206) to remove any excess adhesive from the molar and cuspid, or bicuspid, tooth surface.
- h.** Polish the teeth to a fine, smooth finish.

Rethink Class III Treatment...



Shifting the way you think about orthodontics.