



ALL-IN-4

TREATMENT PLANNING PROTOCOL
AND IPR TECHNIQUE

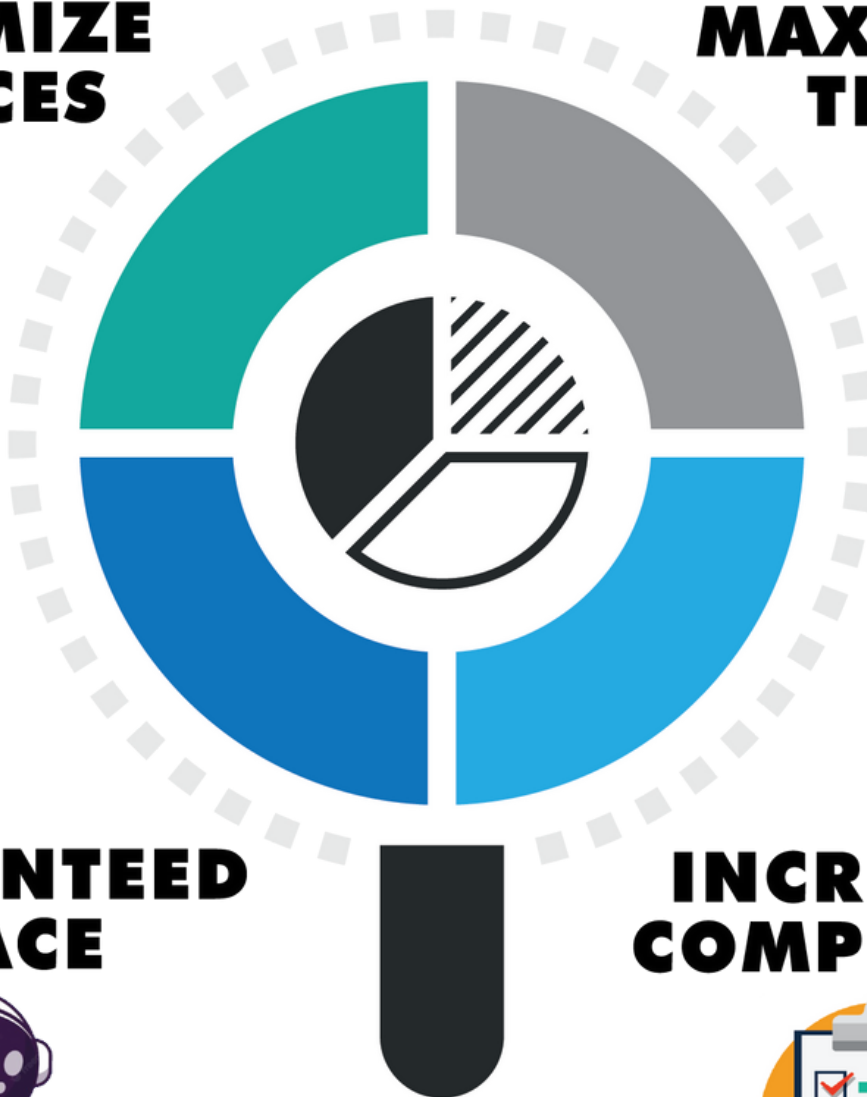
FUNDAMENTALS OF ORTHODONTIC TOOTH MOVEMENT



**OPTIMIZE
FORCES**



**MAXIMIZE
TIME**



**GUARANTEED
SPACE**

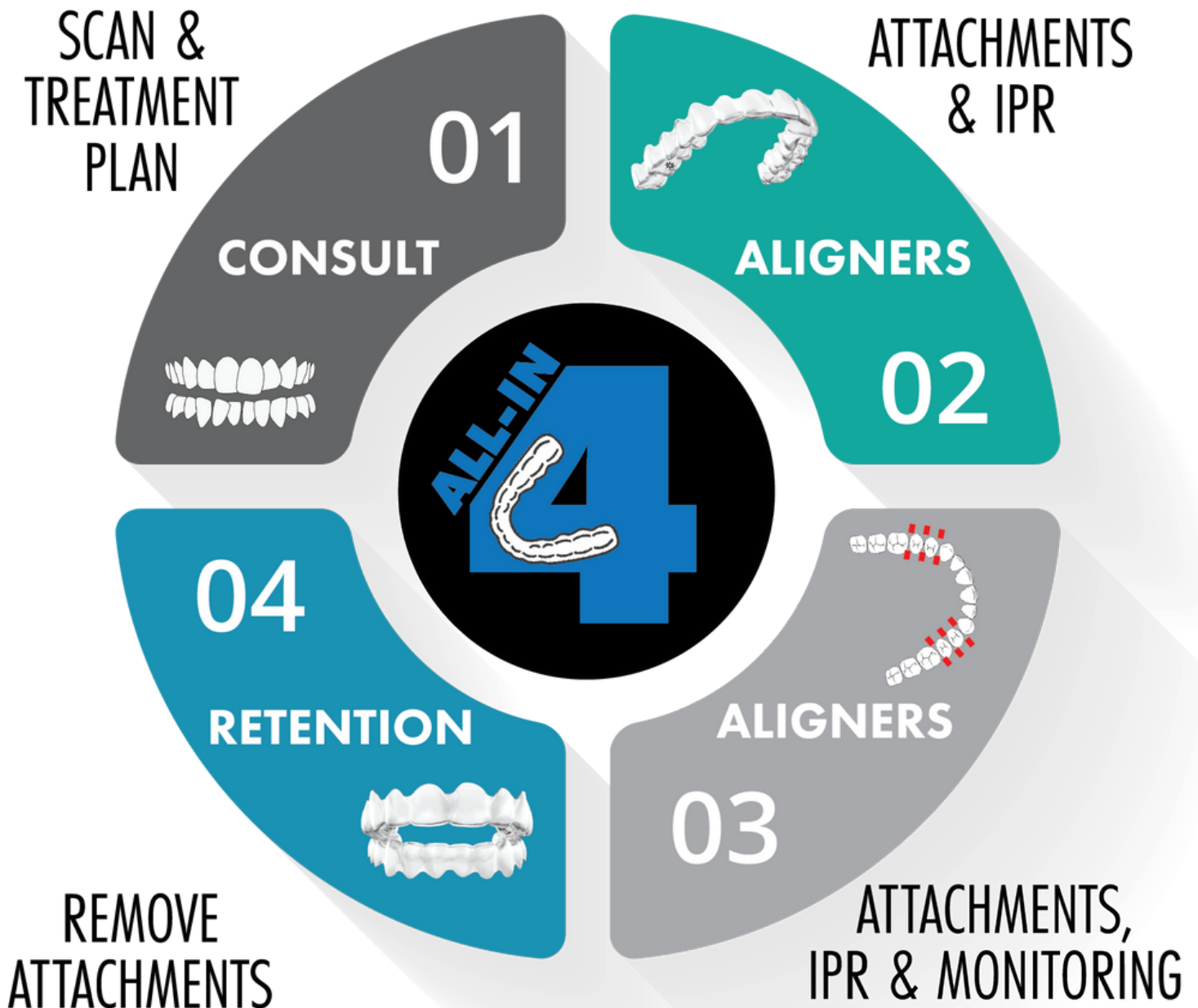


**INCREASED
COMPLIANCE**



CREATED FOR YOUR PRACTICE

The ALL-IN-4 system has been created to allow providers of clear aligner orthodontic treatment to optimize, interact, monitor and oversee patients in a high definition, virtual digital environment and complete treatment in as little as four visits.



THE SYSTEM CONSISTS OF 4 COMPONENTS



- A. ALL-IN-4 Treatment Plan protocols
- B. Clustered IPR
- C. Data Capture Kit
- D. Patient Aligner Pouch (Accelerated)



TREATMENT PLANNING PROTOCOLS

When developing a clear aligner simulation using the **ALL-IN-4 Treatment Planning and IPR Techniques**, you should always consider the patient's safety, function, tooth vitality and aesthetic results in respect to the patient's chief concerns and expectations.

Firstly, create a digital treatment plan as you would normally prescribe, taking into account the following key components:

- the complexity of the case
- facial features & soft tissue
- gingival biotype
- bone support
- anatomy of crown/root
- modes of creating space
- need for A-P movements
- utilisation of aligner features
- velocity of tooth movement
- aligner coverage

The **ALL-IN-4 Treatment Planning Protocols and IPR Technique** is incorporated once the digital treatment plan is available. The key to **ALL-IN-4** is full utilisation of the **Staging Panel** and the **Tooth Movement Table** when finalising a treatment plan.



Our **ALL-IN-4 Treatment Planning Protocol and IPR Technique** will allow you to create a digital treatment plan where IPR and attachment placement are performed before aligner # 1 and again towards the middle of treatment. Using SpaceCHQR[®], our protocol has the ability to review critical contact points during treatment which allows IPR to be easily clustered at the beginning and middle of treatment.

1. PROGRAM ATTACHMENTS AT STAGE 1

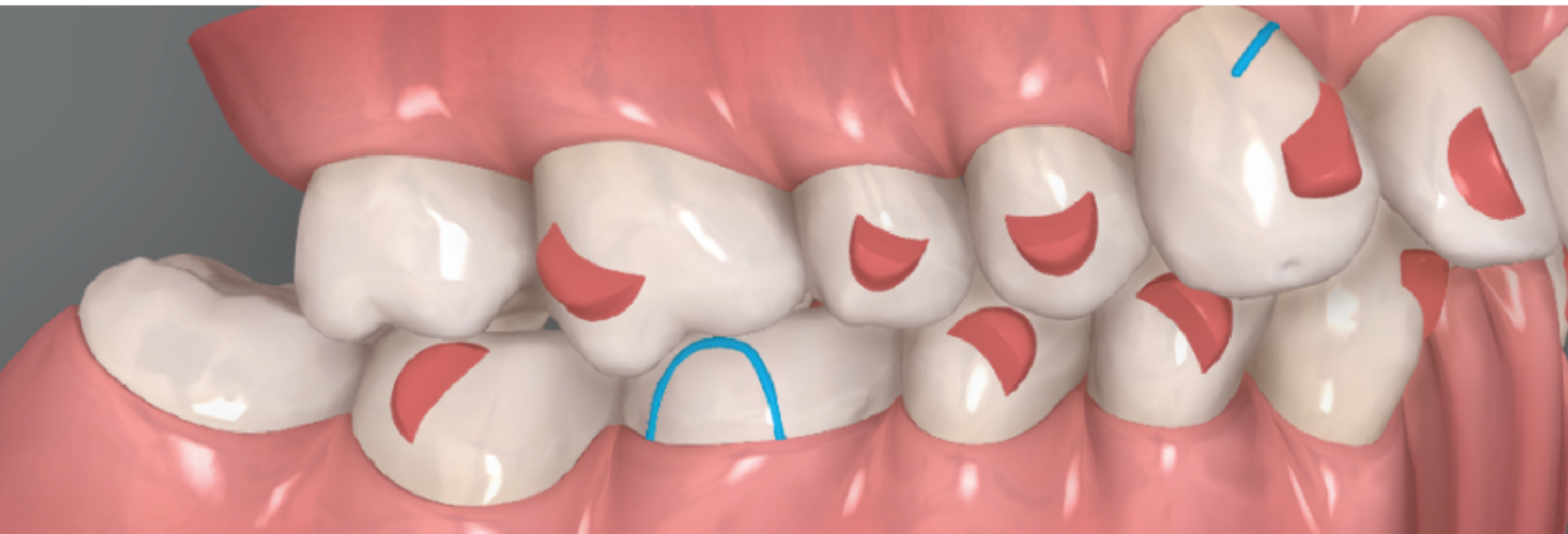
Review the treatment options to place all attachments at the first aligner stage. If you have attachments programmed that cause premature contact with the opposing tooth, you can choose to either:

- a) Reposition the attachments by changing their location, orientation and profile.
- b) Delay attachment placement until the middle of treatment.



2. PROGRAM ELASTICS AT STAGE 1

Review the treatment options to place buttons for elastics at aligner #1. Class II and Class III elastic use does not need to start at aligner #1 but you can bond the buttons at this stage and have the patient use the elastics when prescribed.



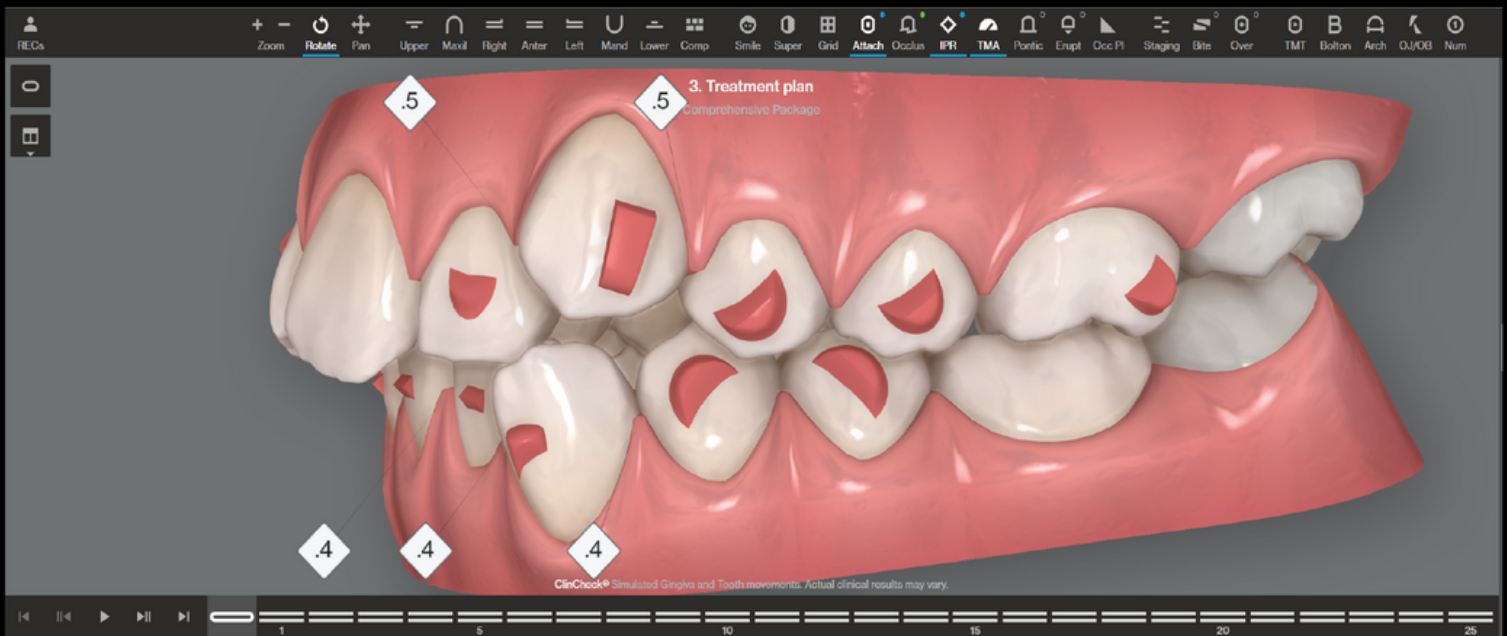
3. CREATE IPR CLUSTERS EARLY IN TREATMENT

Review the treatment options to program IPR as early as possible during the treatment plan, preferably in 2 clusters.

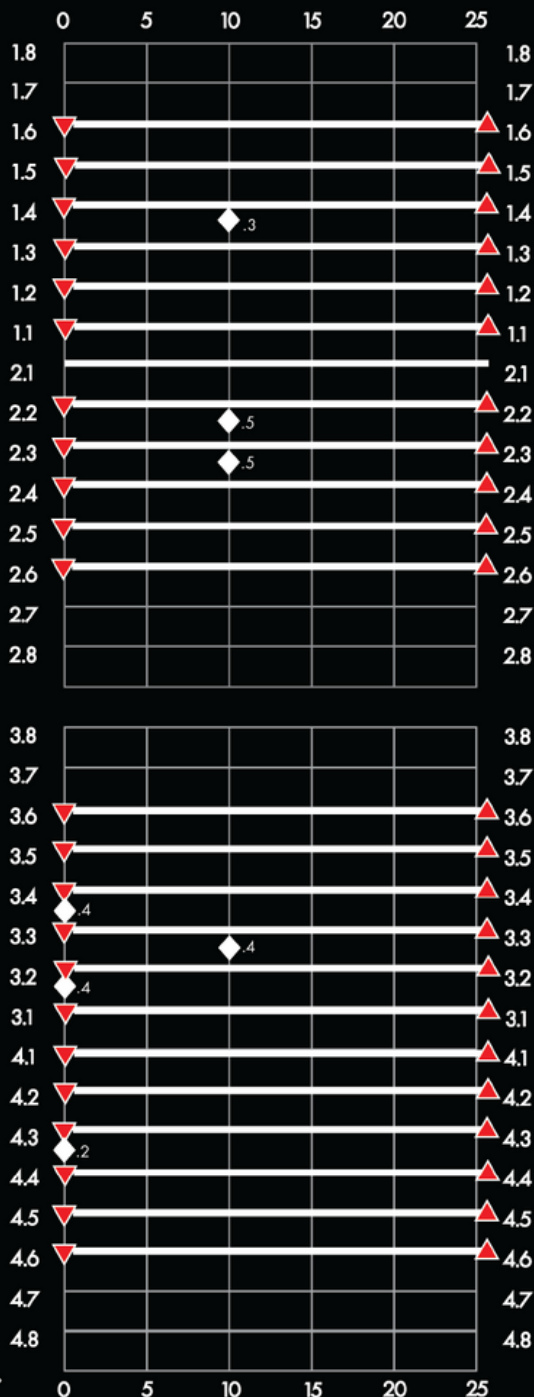
Identify the IPR that is required in the treatment plan and schedule IPR when the contact points are as close to parallel as possible.

In general, you should be able to program IPR on contact points distal of the canines before aligner #1.

Performing IPR early creates space quickly to allow orthodontic tooth movement to take place immediately. Creating space early prevents round tripping tooth movement, whereby the teeth will not need to be proclined/retroclined and will also prevent binding of the teeth which ensures orthodontic tooth movement can take place.



IPR Staging Panel



To create the **first IPR cluster**, move to aligner #1, all IPR required between aligner #2 - #5. Alternatively when planning the treatment sequence, request for IPR to only be conducted before aligner #1 and at the half way point in treatment.

Creating the **second IPR cluster** involves moving all IPR required after aligner #5 to be performed before aligner #11 is inserted. Note that any IPR required after aligner #11 can also be programmed earlier, therefore you can perform this before aligner #11.

In shorter or longer cases, the same protocols should be employed.

In extremely complex and longer cases, an extra visit may be scheduled.

Examples:

* In a treatment plan of 16 aligners, simply program IPR before aligner #1 and then again before aligner #9.

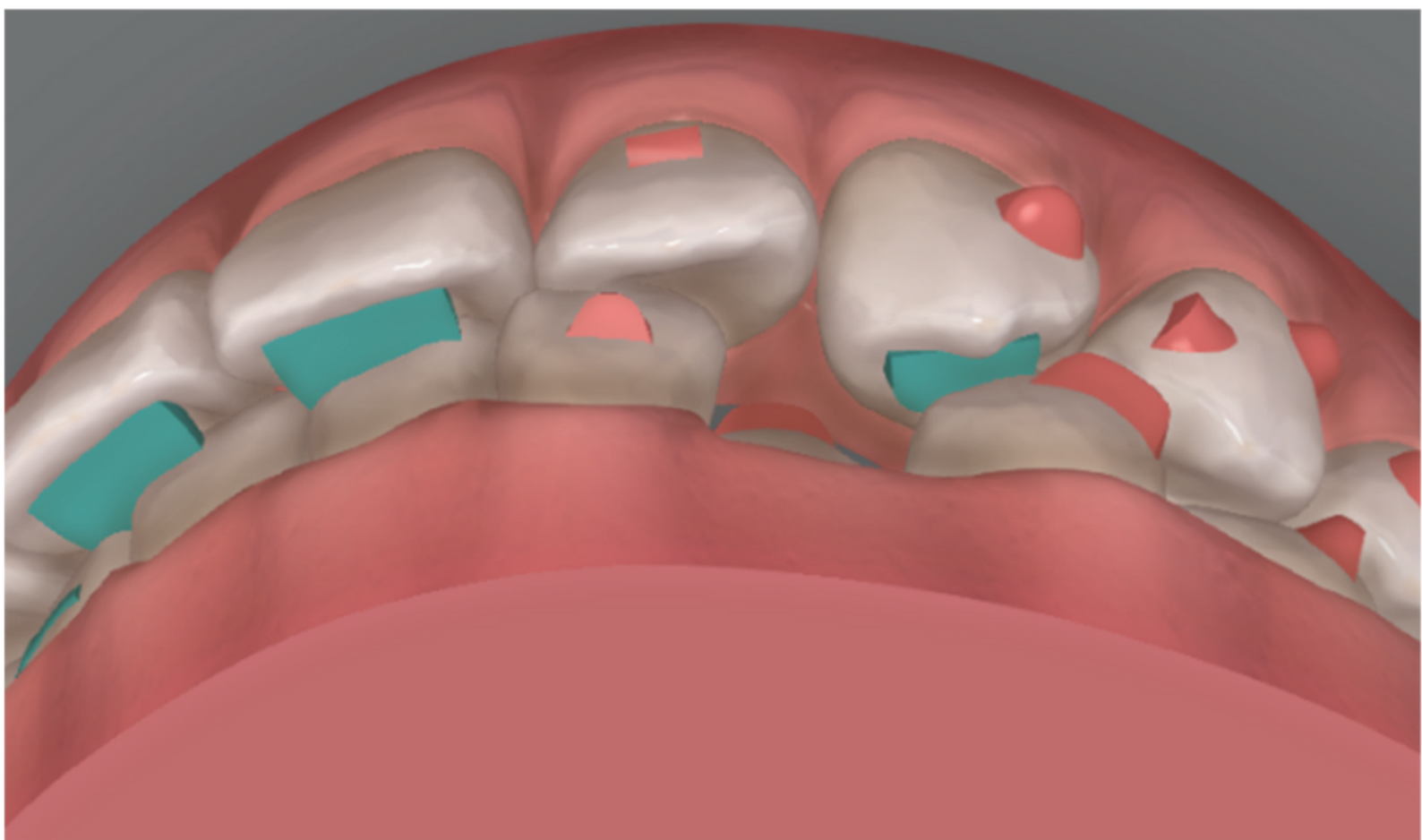
* In a treatment plan of 30 aligners, simply program IPR before aligner #1 and then again before aligner #16.

* If concerns about complexity of movement or compliance is an issue, simply schedule visits at aligner #10 and prior to issue of aligner #20.

4. UTILIZE BITE RAMPS WHEN POSSIBLE

Using **bite ramps** will disengage the bite, allowing movements to take place without having to move the opposing teeth at the same time.

Utilize bite ramps when posterior crossbite correction is required and/or when intrusion needed is greater than 1.5mm.



The techniques and armamentarium for safe, clustered IPR are discussed in the following pages.

IPR PROTOCOLS AND TECHNIQUES



Creating space utilizing the **ALL-IN-4 IPR Technique** needs to be meticulously planned to allow for orthodontic tooth movement to unravel crowding, yet is quite simple. Using a clustered IPR technique, 2 visits only are required to achieve the space required.

SAFE CLUSTERED IPR - QUICK GUIDE



QWIKSTRIP™



QWIKSTRIPS OPENER WHITE SERRATED 0.05mm

Start with Qwikstrips White Serrated Opener (0.05mm), these are ideal for breaking contact points.



QWIKSTRIPS HANDSAW YELLOW SINGLE-SIDED 0.07mm (STRAIGHT)

Use Qwikstrips Yellow Single-Sided Straight Handsaws after contact points have been opened to increase space to 0.07 - 0.10mm.

QWIKSTRIPS HANDSAW RED SINGLE-SIDED 0.10mm BLUE SINGLE-SIDED 0.13mm

Use Qwikstrips Handsaws after contact points have been opened to increase space to 0.20 - 0.25mm



EOCA IPR BURS & GAUGES

Use EOCA IPR Burs after contact points have been opened to increase space to 0.30 - 0.50mm using the commonly used gingival to incisal approach, whereby the bur is engaged below the contact point and moved occlusally. You can also use these burs for the traditional buccal to lingual method.

Reduction of 0.30mm to 0.50mm can now be delivered by diamond burs.

Use EOCA gauges for exact measuring.



QWIKSTRIPS HANDSAW YELLOW SINGLE-SIDED 0.07mm (CURVED)

Use Qwikstrips Yellow Single-Sided Curved Handsaws to round corners and minimize gouging.

TECHNIQUE & ARMAMENTARIUM FOR SAFE, CLUSTERED IPR

Plan your IPR carefully and only reduce interproximal enamel. Check for black triangles, the length of the contact points and allow for the papilla to fill the space.

Wherever possible, IPR should allow the vertex of the papilla to be in line with the contact point vertically.

Care should be taken to keep the central incisors symmetrical, the same width and to respect the facial midlines: try not to slenderize the laterals too much. Consider adjusting over-contoured restorations before reducing enamel.

Break the contact point carefully: the most precise way to get an accurate amount of enamel removed is with a single-sided reduction on one proximal surface at a time.





QwikStrips have a variety of handsaws that sequentially open the contact points up to around 0.20mm. These handsaws are safe accurate and are fabricated in single-sided, double-sided, straight or anatomically curved. Using Qwikstrips it is almost impossible to form a ledge or gouge the enamel. You can then utilize specific diamond burs (anterior and posterior) to speed up the process and offer excellent comfort during the procedure. Check the amount of reduction continuously using an IPR gauge.



TECHNIQUE & ARMAMENTARIUM FOR SAFE, CLUSTERED IPR

Fine and Superfine IPR Diamond Burs produce rapid, deadly accurate interproximal reduction that is comfortable for the patient. Reduction can now be delivered from as little as 0.30mm right up to 0.50mm.

The two most common techniques employed with these burs are:

1. Gingival to incisal approach (where the bur is engaged below the contact point and moved occlusally), and
2. Traditional buccal to lingual approach

Careful handling of these slender precision burs is paramount as they are quite fragile.

Finishing burs to smooth and shape the proximal surfaces are available or use a curved single sided QwikStrip to ensure that no ledging or roughened areas have been created.





SPACE CHQR

The SpaceCHQR® device is a series of gauges that verifies the existence of sufficient space for tooth movement and the patient can confirm that the necessary space exists before each aligner changeover. If insufficient space exists, the patient is encouraged to remain in their current aligner and consult with their healthcare professional to create sufficient space before proceeding to the next aligner. The outcome is that collisions between teeth are avoided and significant time wastage from changing to an ill-fitting aligner with little chance of movement is negated.

- Red Blade 0.03mm
- Orange Blade 0.04mm
- Green Blade 0.05mm

