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Case Report

Angel Aligner PRO: Correction of a class III malocclusion with lower molar distalization

Dr. David González Zamora
Orthodontist

No need to hide your smile
Angel Aligner is here


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Angel Aligner Pro:
A Dual Modality Clear Aligner Solution

Introduction

Angel Aligner Pro is an innovative clear aligner system utilizing masterMulti technology, designed for efficient and predictable orthodontic treatment. It employs a dual-modality system, using two aligner materials—masterControlS and masterControl—in a “7+3” wear cycle per stage, improving efficiency and reducing overall treatment time.

Challenges in Clear Aligner Treatment

Historically, aligner therapy has faced limitations in complex movements such as:

- Deep bite correction
- Torque control
- Mesialization and root control
- Molar mesial tipping
- Loss of occlusal plane levelling

These limitations arise due to the flexible nature of aligners, leading to poor root control, loss of anchorage, and tipping effects.

Aligners generate forces that move teeth by attempting to return to their original shape. However, a single-material aligner struggles to balance force application, leading to unwanted movement patterns.

The Dual Modality Advantage

Angel Aligner Pro combines flexible and stiff materials, drawing inspiration from fixed orthodontics:

- Flexible materials (masterControlS): Provide elasticity, comfort, and ease of insertion but have poor spring-back, leading to tipping effects.
- Stiff materials (masterControl): Offer better root control, torque control, and structural recovery, but may be less forgiving for off-track teeth.

The “7+3” wear cycle balances and optimises these material properties:

- 7 days of masterControlS for initial tipping and movement
- 3 days of masterControl for root control and torque expression

Clinical Advantages of Angel Aligner Pro

- Better comfort & control: Dual materials ensure precise and predictable movements.
- Increased treatment efficiency: Reduces treatment time by optimizing tooth movement predictability.
- Enhanced complex movement capabilities: Supports bodily movement, root torque control, and occlusal levelling.
- Durable & stain-resistant materials: Engineered for long-term performance.

Conclusion

Angel Aligner Pro enhances the efficacy of clear aligner therapy by integrating dual-modality material science with real-world orthodontic principles. This approach improves treatment predictability, efficiency, and patient experience, making it a superior option for complex orthodontic cases.

Section	**Crowding**
Product	**Pro**
Malocclusion	**Class III, Deep-bite, Cross-bite, Lower Distalization**
Protocoles and features	**A8 Molar distalization**

BIO David González Zamora

Dr. David González Zamora has balanced a professional career as an orthodontist, educator, and clinical advisor. He practices exclusively as an orthodontist at Clínica Smilodon, where he is the founder and medical director. He has taught at various Spanish universities to date, offering classes in postgraduate orthodontics. He regularly participates in courses and conferences worldwide, sharing his expertise in the field of digital orthodontics and establishing himself as an international authority. He currently serves on the advisory board of Angel Aligner, contributing to the improvement of clear aligner systems.

Patient introduction

Age	**19**
Gender	**Female**
Patient initials	**MRA**
Treatment time	**13 months**
Number of aligners	**39**

Chief complaint

The patient, a 19-year-old woman, was evaluated to undergo orthodontic treatment using the Angel Aligner Pro system. She presents with a skeletal Class III, mesofacial, with a dental Class III malocclusion and a 2 mm deviation of the lower midline to the left. Teeth 33 and 43 are out of the arch and cortical bone, with a crossbite issue on tooth 33. Fortunately, no functional issues affecting swallowing or breathing have been detected. The patient's motivation for starting treatment was a general review of her dental and aesthetic health. The soft tissue analysis reveals mandibular protrusion that influences her facial profile. This diagnosis highlights the need for a comprehensive approach to address dental and skeletal misalignments, improving both the patient's functionality and facial aesthetics.

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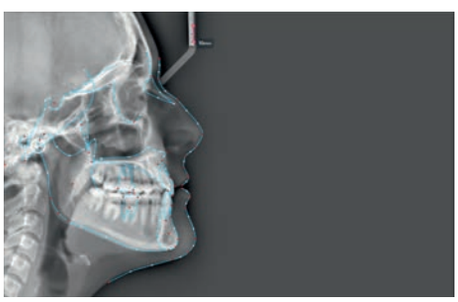
Initial Photos and datas



Measurement	Normal	Value
FMIA(L1-FH)	54.9±6.1	78.6 ↑
FMA(FH-MP)	31.1±5.0	23.67 ↓
IMPA(L1-MP)	93.9±6.2	77.72 ↓
SNA	82.8±4.0	81.89
SNB	80.1±3.9	82.58
ANB	2.7±2.0	-0.69 ↓
AO-BO(Wits,mm)	-1.0±2.8	-5.5 ↓
OP Angle(OP-FH)	10.0±2.0	7.62 ↓
Z-Angle	75.0±5.0	89.08 ↑
AFH(mm)	64.0±0.0	60.2 ↓
PFH(mm)	47.0±0.0	43.83 ↓
PFH/AFH(%)	70.0±5.0	72.8

Case Report

Clinical examination and diagnosis

- Patient Age: 19 years old
- Skeletal class III
- Dental Class III, 2 mm deviation of the lower midline to the left. 33 and 43 out of the arch and the cortical bone.
- Crossbite of 33.
- No functional issues
- Patient Motivation: General Review
- Soft Tissue Analysis: Jaw protrusion

Treatment plan

- Distalize third and fourth quadrant
- Solve the cross bite of 33.
- Level Curve of Spee.
- Improve the root position of 33 and 43 in relationship with the cortical bone.

Treatment details

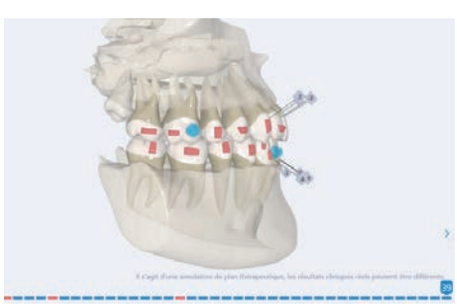
General Dentistry:

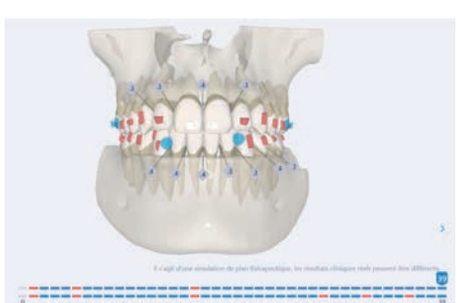
- Solve gingivitis and reinforce the patient's oral hygiene techniques to ensure optimal oral health.
- Treat existing cavities with dental fillings to guarantee the integrity of the teeth before starting orthodontic treatment.

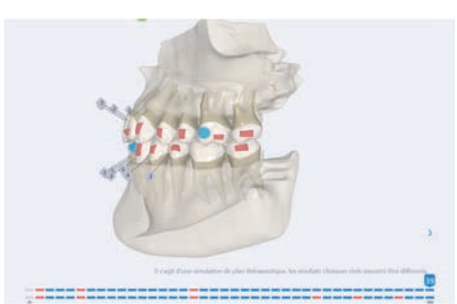
Orthodontics:

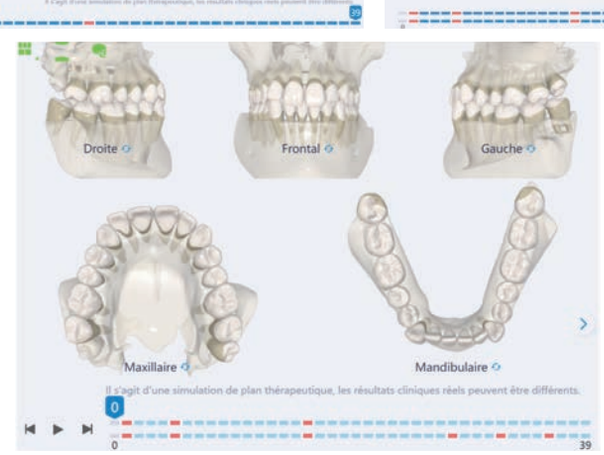
- Distalization of the Third and Fourth Quadrants: Move the teeth distally in these quadrants to achieve a Class I relationship using the A8 protocol, improving the patient's dental alignment and occlusion.
- Solve the Crossbite of Tooth 33: Correct the position of tooth 33 to eliminate the crossbite, contributing to a more balanced occlusion.
- Intrusion of the Lower Anterior Teeth: Adjust the vertical position of the lower anterior teeth to level the curve of Spee, improving the harmony of the occlusion.
- Improve the Root Position of Teeth 33 and 43: Optimize the position of the roots of teeth 33 and 43 in relation to the cortical bone to ensure adequate bone support and long-term stability.

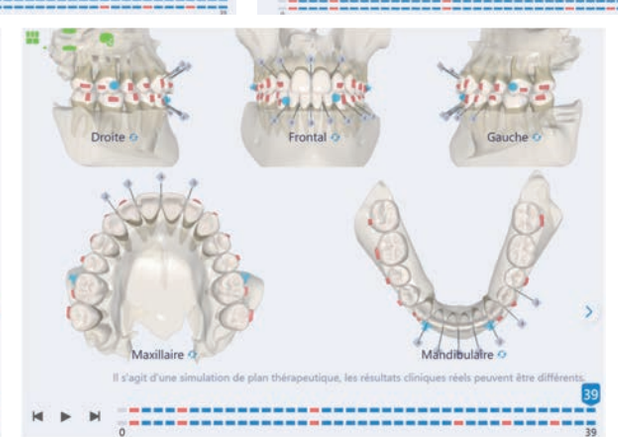
Treatment setup











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Treatment progress

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Treatment results

Before treatment

After treatment

Before treatment

After treatment

Before treatment

After treatment

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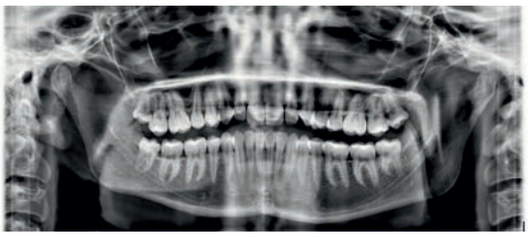
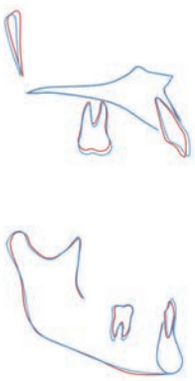
Treatment results

Before treatment



After treatment



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SNA	82.8±4.0	82.09
SNB	80.1±3.9	82.64
ANB	2.7±2.0	-0.55 ↓
AO-BO(Witsmm)	-1.0±2.8	-3.8
OP Angle(OP-FH)	10.0±2.0	5.46 ↓
Z-Angle	75.0±5.0	88.65 ↑
AFH(mm)	64.0±0.0	60.83 ↓
PFH(mm)	47.0±0.0	45.72 ↓
PFH/AFH(%)	70.0±5.0	75.16 ↑

Treatment experience

The patient was treated with Angel Aligner Pro, without the need for any refinement.
A total of 39 treatment phases were planned. Each treatment phase involves using a flexible aligner for 7 days and a more rigid aligner for 3 days. Therefore, each treatment phase takes 10 days. In total, the treatment time was one year and one month. The follow-up review protocol consisted of seeing the patient in the clinic every two months.
Interproximal reduction (IPR) was performed in the anterior segment of both arches to compensate for the Bolton discrepancy. Angel Buttons were prescribed to combine the use of aligners with Class III elastics throughout the treatment. The elastics were 3/16" in length with a force of 4.5 Oz.
What is remarkable about this case is the speed with which it was resolved, the fact that it was unnecessary to request additional aligners beyond the initial phase, and the control of rotation, tip, and root torque of the lower canines.

Note

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