Interactive PDF
Digital Experience

ClearCorrect Overview & Case Examples Booklet

clearcorrect
A Straumann Group Brand

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Hello! We are ClearCorrect.

Nice to meet you.

The story of clear aligners began in the 1940s with an article written by Dr. H.D. Kesling, describing the use of a positioner to align teeth.

Since then, equipment and technology have improved, and clear aligners became commercially available on a large scale at the end of the 1990s.

Founded in 2006 by Dr. Willis Pumphrey, ClearCorrect, an American company operating for more than a decade in several different countries, was acquired by the Straumann Group in 2017. Since then, ClearCorrect has been investing heavily in research and constantly improving our product and service, so as to be able to offer you, doctor, the best product on the market as far as aligners are concerned.

This booklet will present a number of cases with differing degrees of complexity, in which ClearCorrect aligners were used.

Workflow Summary

Here is a general overview of what happens during the case submission process. If you need more detailed information, read on or follow the specific links.

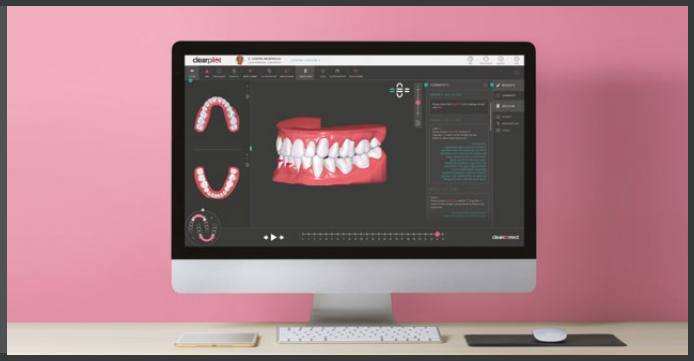
Submission

The first step is to register as a provider at dr.clearcorrect.com
After registering you can submit your first case. We'll need all your patient records, including prescription, photos and dental impressions or scans. You can send PVS impressions to us.
See the section dealing with the Initial Appointment section for more information.

Treatment setup

Once we've received all the necessary treatment information, we will create a treatment setup.

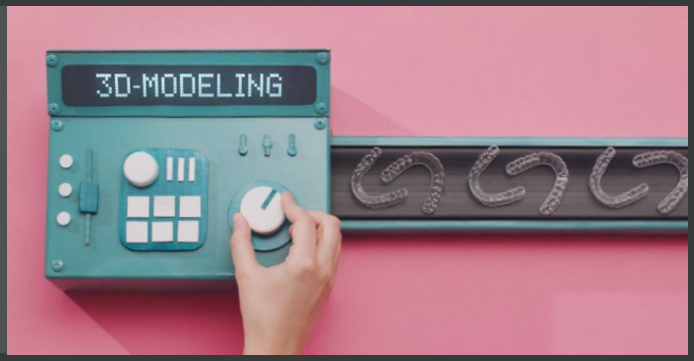
When the setup is ready, we'll send you an e-mail, and you can review it on the Doctor's Portal dr.clearcorrect.com.
You won't pay anything until you approve the treatment setup.



Manufacturing

Once you approve the setup, manufacturing begins!

We print 3D models, thermoform the aligners onto them, trim, polish, and check for quality before they're finally ready to ship.



Shipping

If you've chosen a Flex case, we'll ship all of your aligners at once. If you've chosen an Unlimited treatment, we'll ship aligners to you in phases of up to 12 at a time. This gives you built-in opportunities to review treatment progress and make sure everything is going as planned. If it isn't, be sure to let us know as soon as possible.

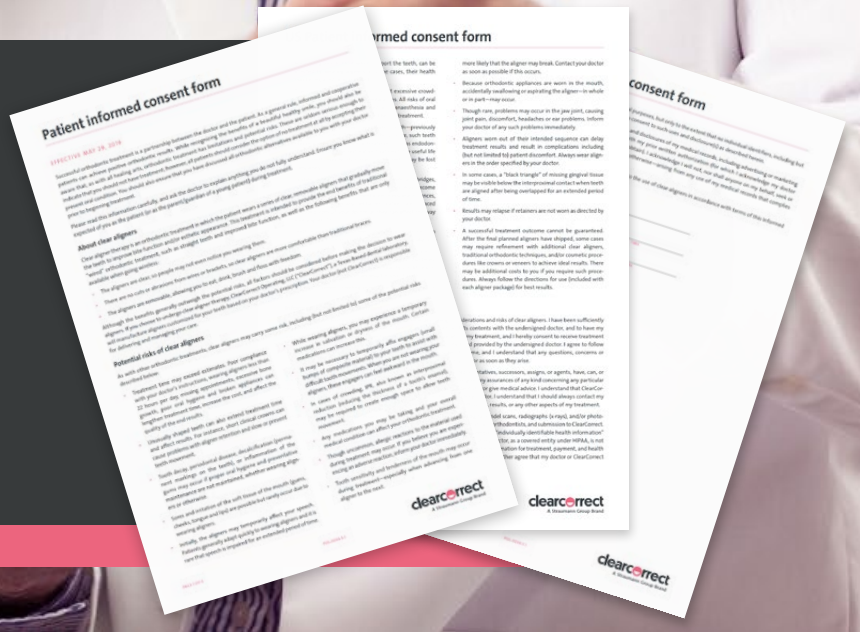
Initial Appointment

Collect all required patient records.

The next few steps will go over how to take photos and impressions of your patients. It's important to take clear photos and impressions so that we can create an accurate treatment plan.

If you find yourself in need of more assistance on these topics, you can connect with one of our knowledgeable provider services representatives at **support.clearcorrect.com**

Begin by having the patient review and sign an informed consent and agreement. An example is available on **dr.clearcorrect.com** Remember to keep a signed copy for your records.

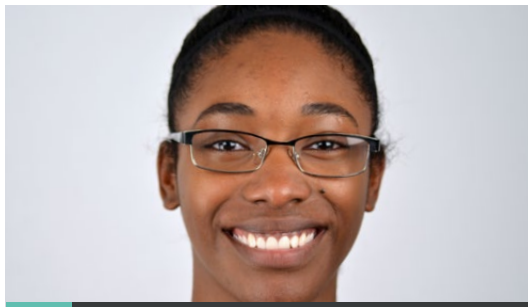


Photos

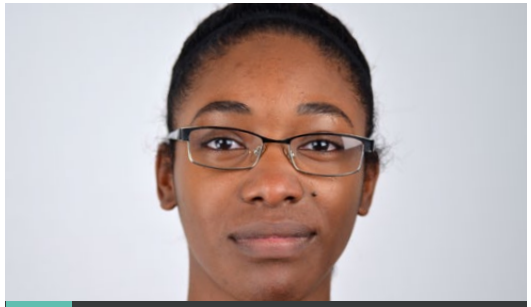
We use photos from all eight angles below to verify the details of your patient's occlusion and adjust our treatment plan to optimize your patient's profile and lip appearance.

You'll need to upload a full set of photos with every case you submit. We also recommend that you provide x-rays, but we won't hold up your case if you decide not to include them. If you don't have the photos on-hand when you submit your case, you'll be able to upload them later on the case page, but don't wait too long - the case won't move forward until we have all required records.

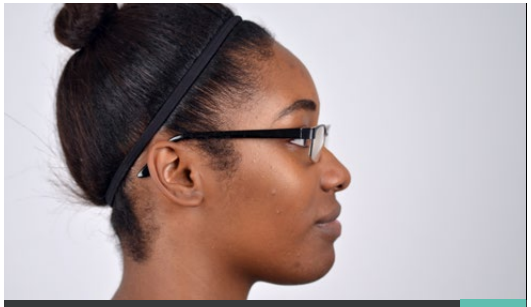
Your photos can be uploaded as separate images, or as one composite image or PDF. The exact format of your photos isn't important. What is important is that you include clear, well-lit photos from all eight angles.



1 Full face (smiling)

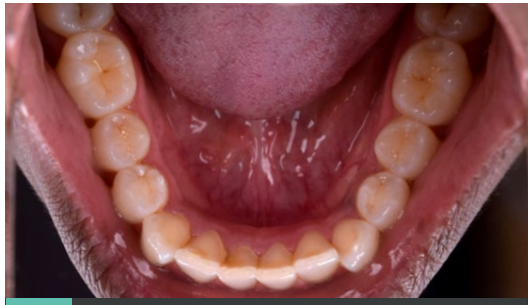


2 Full face (not smiling)



Profile of face (not smiling) 3

Upper occlusal view 4



5 Lower occlusal view

6 Right lateral view

Front view 7

Left lateral view 8

Intraoral Scanning or impressions

Take upper & lower PVS impressions or intraoral scans of both arches in occlusion. A bite registration is optional.

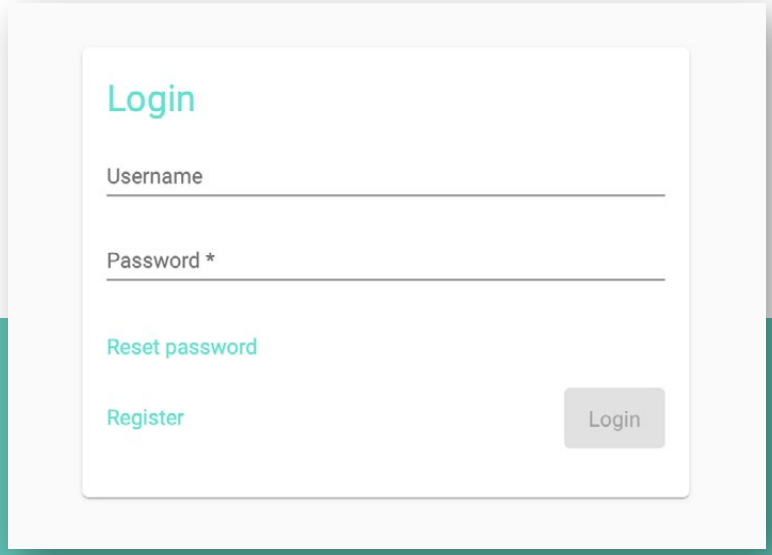
Export any 3D scans as STL files to your computer. Upload directly from your scanner (CEREC, 3Shape, Dental Wings) only after submitting the case prescription online.

Optional: Fill out the “pre-submission worksheet” with your patient chairside to collect all information before submitting the case online.

Case submission

Using the doctor portal

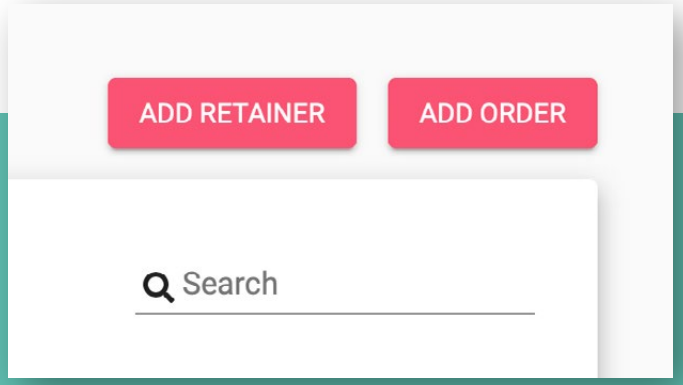
01 Sign into your doctor portal account at dr.clearcorrect.com.



02 After signing in, select the “Add Order” button. You will be asked to input patient information.

This includes:

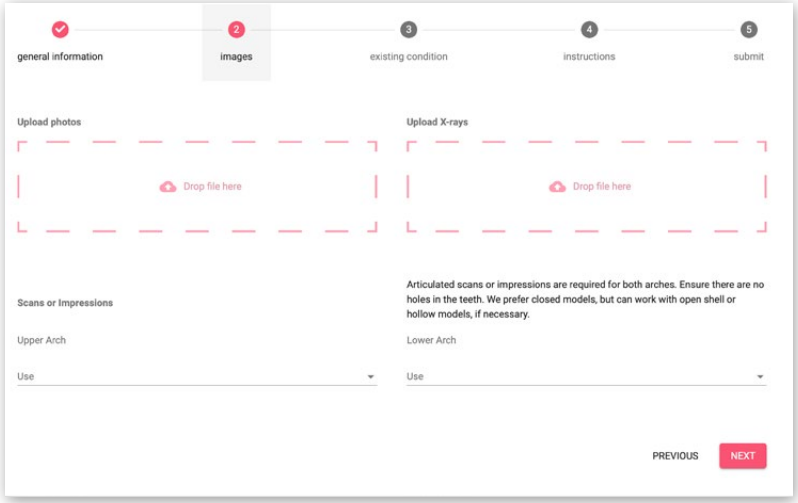
- Practice name
- Patient date of birth
- Patient gender
- Treatment information
- Duration
- Recommend, limit and number of steps
- Wear schedule, 1, 2 or 3 weeks
- Which arches are being treated



03

Upload photos and x-rays. X-rays are optional and we require 8 photo angles:

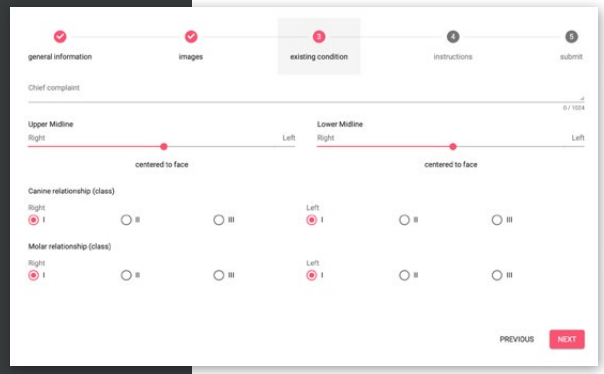
- Full face (not smiling)
- Full face (smiling)
- Profile (not smiling)
- Occluded buccal view of anterior
- Left and right lateral
- Occlusal view of upper and lower
- Select whether submitting scans or physical impressions



04

Provide information about the patient's existing condition:

- Chief complaint
- Midline
- Canine relationship (class)
- Molar relationship (class)



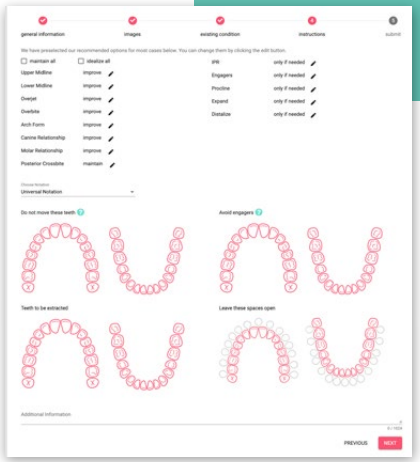
05

Provide instructions for the patient's treatment. Select whether or not you want to maintain, improve or idealize. For specific treatment techniques (IPR, engagers, proclination, expansion, distalization), indicate your preferences: definitely yes, definitely no, or only if needed.

06

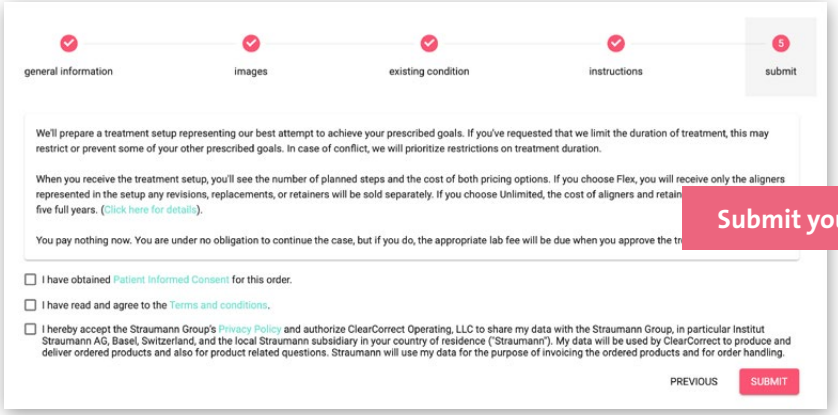
Indicate:

- If you don't want certain teeth moved
- If you want to avoid engagers on certain teeth
- If you plan to extract teeth
- If you want to leave spaces open



07

Confirm that the patient has signed an informed consent form. Confirm that you have read and agree to our current terms and conditions. And lastly...

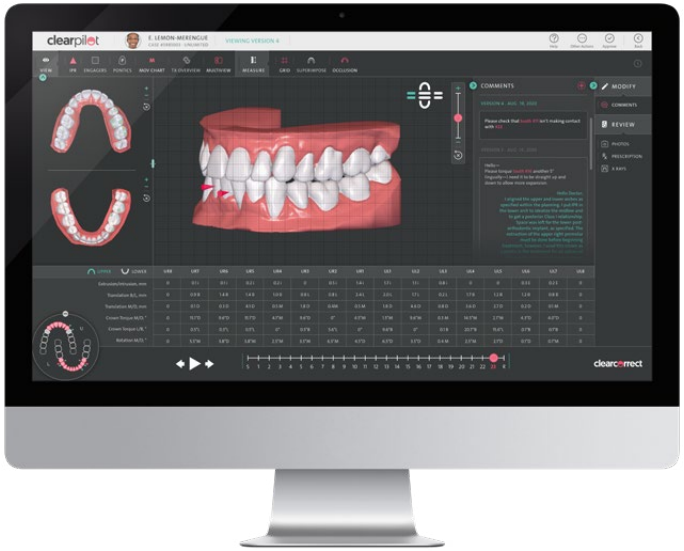


Submit your case!

Treatment steps

01 Treatment setup

The treatment setup will show the movement of the teeth, the length of treatment, and any recommended procedures such as engagers and IPR. Review the setup, and if you and your patient are happy with the plan, approve it on the Doctor Portal. To make changes, click “comments” to list the changes to be made.



02 Dispense Aligners

After you approve the treatment setup, we’ll start work on manufacturing the aligners. Check the Doctor Portal to find the progress of your order.
Once your patient’s aligners arrive, we recommend dispensing two sets of aligners at a time, each time checking the fit of the aligners and progress of the teeth’s movement.

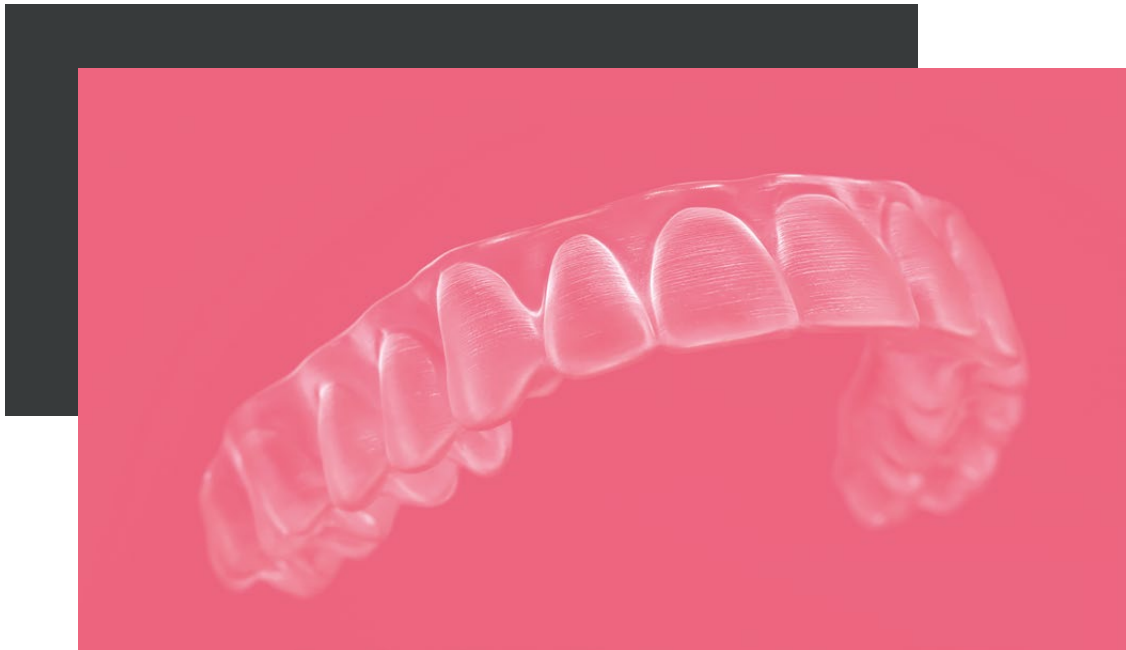
03 Check the patient’s progress

Examine the patient. Confirm that the patient is wearing the correct set of aligners. Confirm that the next scheduled set of aligners fits well. Refer to the treatment plan paperwork or treatment setup and perform any scheduled procedures, such as performing IPR and placing or removing engagers.

The full progress appointment checklist can be found in the Help Center at **support.clearcorrect.com**.

04 Finishing treatment

Determine if treatment is finished to your standards and your patient’s satisfaction once the final aligner has been worn. Clinicians often request a revision for some final touch-ups to hone in on the treatment goals. Order retainers on **dr.clearcorrect.com**.



Clinical Photos

To take good quality photographs you'll need the following materials:

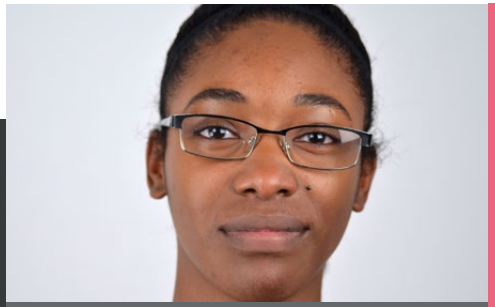
Digital camera

Cheek retractors

Intraoral mirrors (full arch and lateral view in both adult and children sizes)

A solid white wall or background (poster or foam board can be purchased and used instead of a wall). This helps make sure that the patient's facial features are clear in the photo.

Required angles



1. Full face (not smiling)

- Frame the patient's face from the top of the head to the middle of their neck, with the camera oriented vertically
- Patient's head should be oriented vertically in a natural and relaxed position
- Patient should look straight ahead directly into the camera lens
- Patient should have their lips, jaw and teeth in their natural and relaxed position with lips together

2. Full face (smiling)

- The patient's smile should be natural
- Teeth should be visible
- The head should be held straight

3. Profile of face (not smiling)

- The patient's body is turned 90-degrees to their left, so that their right shoulder is pointing directly at the camera and only the right side of their face is visible to the camera
- Patient's head should be in a natural and relaxed position
- Patient's eyes should be horizontal and looking straight ahead
- Patient's hair should be pulled back behind their ear, if long

For all extra-oral photos, the patient should be at a comfortable, direct, 90-degree angle to the camera.

Required angles

4

Use retractor to pull the upper lip away from the teeth

5

Use retractor to pull the lower lip away from the teeth

8

Use cheek retractors to pull lips away from the teeth and gums

6

Have the patient turn their head to their left, so the right side of their face is towards the photographer

7

Have the patient turn their head to their right, so the left side of their face is towards the photographer

Tips & tricks

With most cameras, pressing the shutter button (the button that takes the photo) half way (before you feel that main resistance before the “click”) before actually taking the photo will help to focus the photo.

Taking the photo without first giving the lens a chance to focus usually results in blurry photos.

Light is your best friend. It’s what makes photography possible. So it’s always best if you can take your photos in the most well-lit area of your office.

A ring flash matched to your digital camera and mounted on the front of the lens is the best way to adequately provide enough light for intraoral photos.

Avoid getting too close to what you’re photographing. Many cameras have a hard time focusing on things that are extremely close; in addition, if you have to use flash, the flash will wash out a lot of the detail in the shot if you’re too close. Instead, take a tiny step back and simply zoom in on the subject.

Before **After**

Upon placing the final retainer, we encourage clinicians to take a series of “after” photos, to keep a record of how effective treatment was.

We love to seeing those new smiles, and clinicians who take an extra series of photos are always glad they did!

Great treatment outcomes are the strongest tool you have for growing the clear aligner aspect of your business.

Intraoral Scanning

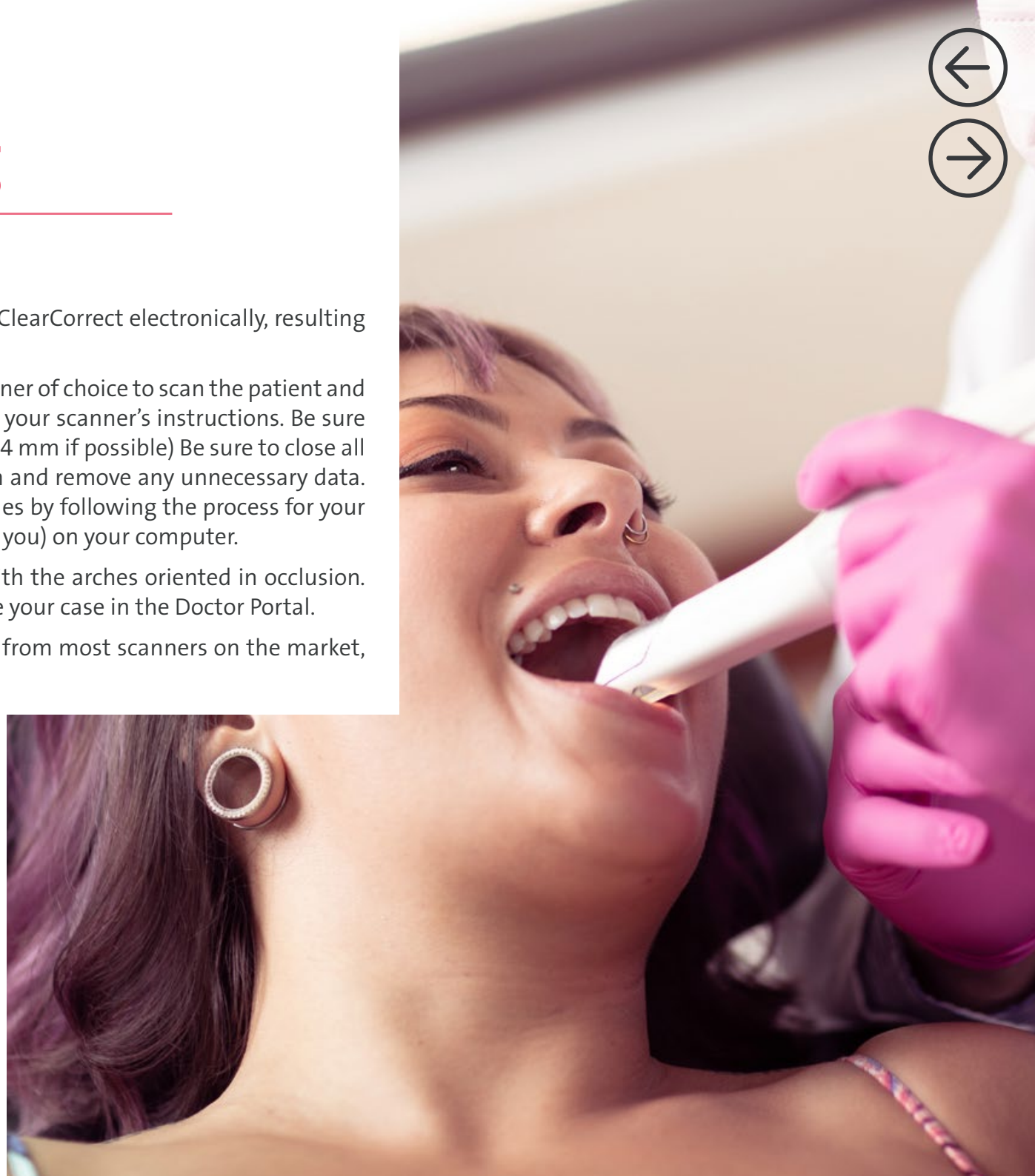
Facilitating your office workflow

Using an intraoral scanner facilitates sending scans to ClearCorrect electronically, resulting in a faster turnaround time.

With the patient seated in the dental chair, use the scanner of choice to scan the patient and create the .STL files. Follow the scan steps according to your scanner's instructions. Be sure to scan a minimum of 3mm of gingiva (try to capture 3-4 mm if possible) Be sure to close all holes in the scan. Review and be sure to trim your scan and remove any unnecessary data. When scanning is complete, export the scans as .STL files by following the process for your scanner, and save the files in a location (determined by you) on your computer.

Be sure to save both the upper and lower scan files with the arches oriented in occlusion. You're now ready to upload your scans when you create your case in the Doctor Portal.

ClearCorrect loves intraoral scans and we accept them from most scanners on the market, just send us your images as an .STL file.



Impressions

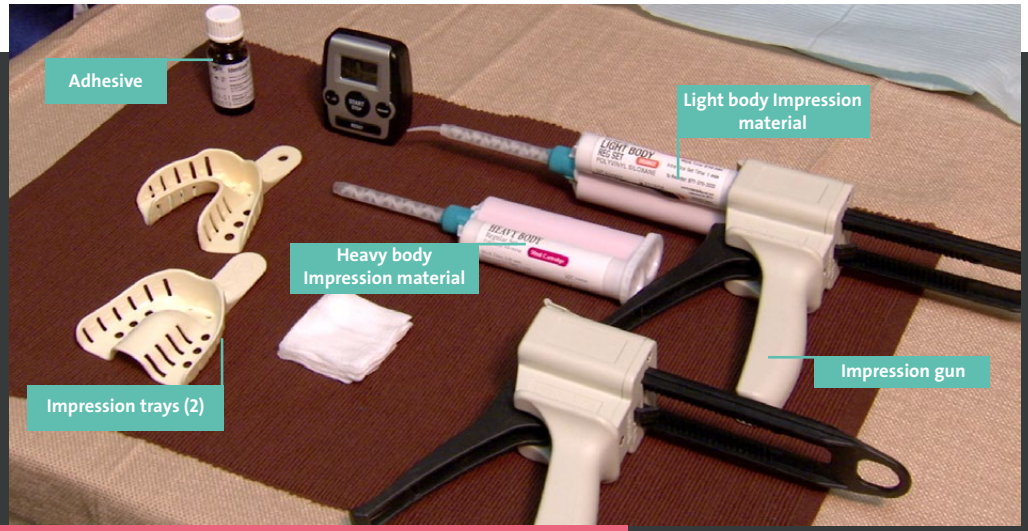
Making impressions

PVS or VPS materials work best for impressions. Alginate is not acceptable because it dries out and the material can shrink or expand depending on environmental factors.

Use disposable and not metal or mesh trays. We don't return trays.

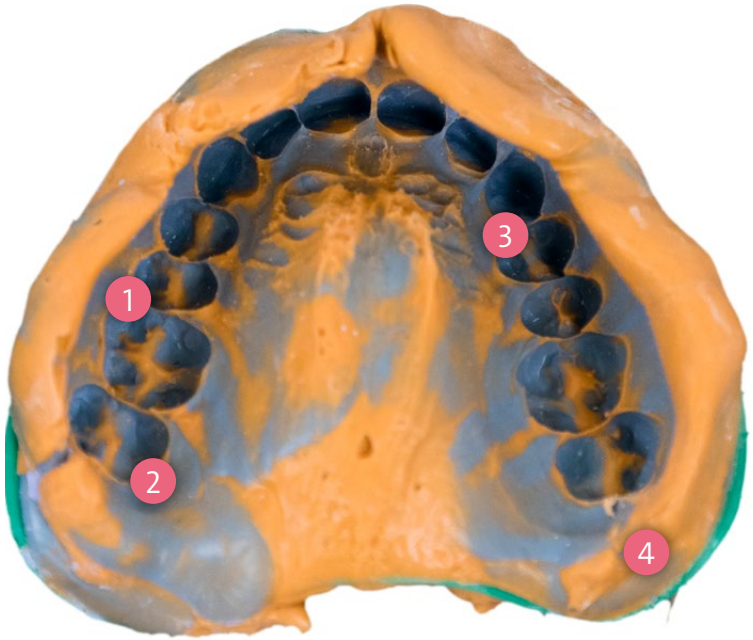
When a metal tray is received, the impression has to be processed manually, which can open the door to potential issues with the aligners. Mesh trays (sometimes known as "triple trays") are often too shallow to capture an adequate 3-4 mm gingival margin, and incisal detail is often lost as teeth impinge on the mesh. The scanning software also does not recognize multiple arches at once.

We recommend using heavy body and light body material. Impression techniques that used heavy body and light body seem to get the best results.



A good impression looks like this:

No bubbles, voids, thin walls, shifts, or double imprints that compromise the dental anatomy.



1. Detailed, accurate occlusal surfaces
   Cusps are sharp, Tray doesn't show through
2. Distal surfaces of molars captured
   More than half of each molar is visible
3. All gingival margins are defined and clear
   Includes at least 3-4mm of buccal and lingual surfaces outside gingival margin
4. Impression material is intact
   No damage, warping or separation of light and heavy material

Tips for your practice

Prioritize aligners in your practice!

Unfortunately, you probably can't just sit back and wait for patients to walk in to your practice asking for clear aligners. That might happen occasionally, but most people don't consider correcting malocclusion until the benefits are presented to them.

Here are some of the actions that set successful practices apart:

01 Ask every patient if they're happy with their smile. Give every new patient a smile survey with questions like:

- How would you rate your smile from 1 to 10?
- What would you change about your teeth?
- Does it feel like your teeth fit together properly when you bite down?

02 Set achievable treatment goals. Start with a simple case. Look for a case with minor issues that can be corrected in less than a dozen steps, without major crowding that might require interproximal reduction (IPR) or difficult movements that might require engagers. Anterior teeth are easier to correct than posterior teeth, and tipping is easier than extrusion or rotation.

03 Talk to every patient about clear aligners, regardless of what they came in for. If they are a good candidate, include aligners in their treatment plan and make sure they have a copy when they leave. If they are not a good candidate, they may know of someone else who is.

04 Let patients get hands-on with a typodont and sample aligners. Teach patients about aligners with before and after photos of treated cases.

05 Play videos for patients in the waiting room and exam area to introduce them to the benefits of orthodontics and how aligners work. There's even a waiting room video playlist that can be played on a loop.

06 Tell patients about the benefits of correcting malocclusion.

07 Make sure ClearCorrect is visible in every part of your practice.

08 Update your website. Add information about ClearCorrect to your practice's website and social media networks. You can find logos, images, and sample copy at: **support.clearcorrect.com**

Case Examples

6.1 Correction of upper incisor crowding

Dr. Alexandre Motta

Certified by the Brazilian Board of Orthodontics (BBO), Associate Professor of Orthodontics (UFF), Coordinator of the Specialization Course in Orthodontics (UFF), PhD in Orthodontics UERJ/University of North Carolina), Specialist and Master of Science in Orthodontics (UERJ).

Summary

68-year-old male patient who previously underwent orthodontic treatment on his lower arch only. Treatment ended 5 years ago, and he was treated by the same clinician. He returned for upper arch correction as directed by his dentist, a general practitioner, who suggested alignment of the upper arch prior to the restoration of tooth number 12, which had already undergone root canal treatment, with a metal base and porcelain crown. Patient is a Class I with slight deviation of the midline to the left (1mm). Tooth number 12 and 21 are slightly protruded. Lower arch is aligned with the presence of a fixed retainer. Extensive history of orthodontic treatment with many restorations of posterior teeth and generalized gingival recession.

Orthodontic Treatment Plan

Align the upper anterior addressing the mild protrusion of incisors, while maintaining the midline, and performing IPR if necessary. Movement of the posterior teeth was avoided, maintaining good initial posterior occlusion, as well as avoiding the use of an attachment to the crown on 12, which could loosen during treatment.

Clinical procedure

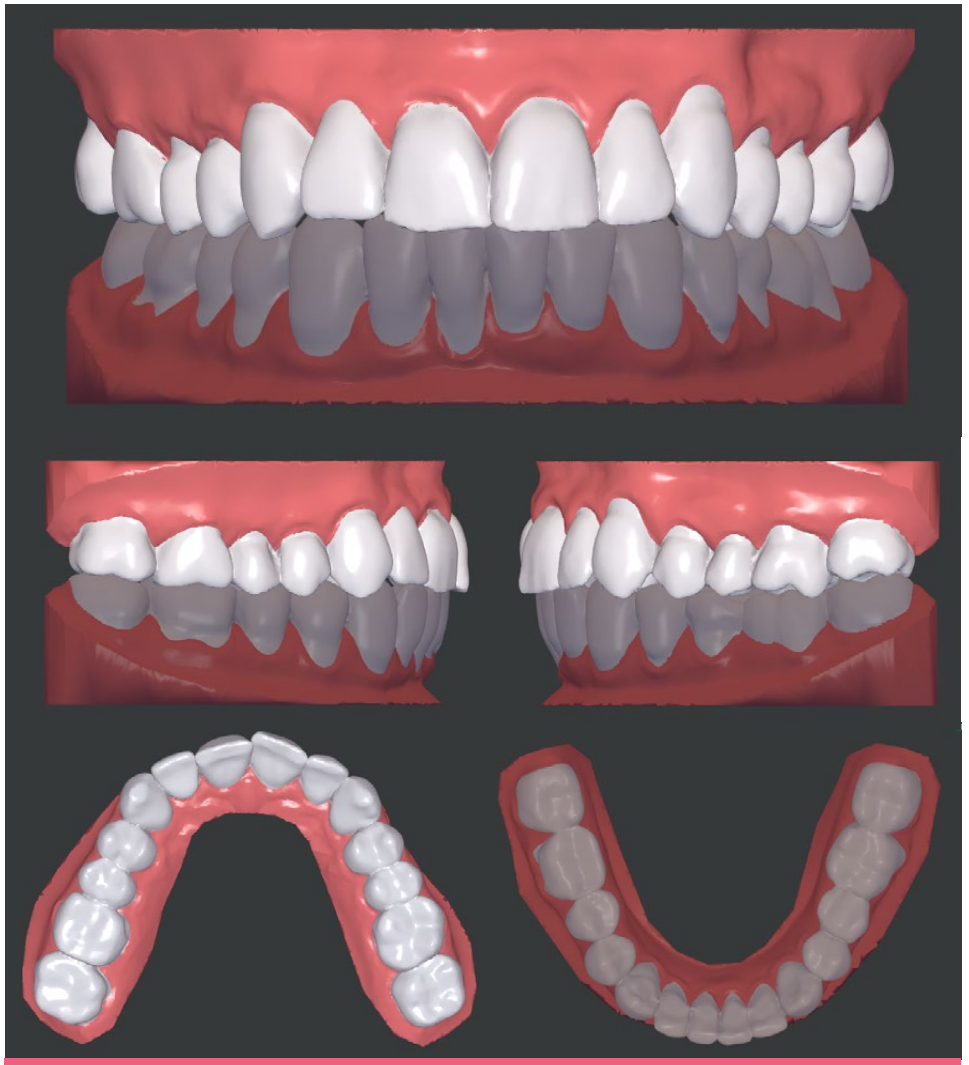
Treatment with aligners comprised 6 steps (approximately 3 months) placed 1 engager on tooth number 11 and performed 0.3mm of IPR between 21 and 22 during the 3rd step. The patient was instructed to wear the aligner for a 2-week period, with a monthly follow-up. The movement of 21 was refined by means of a dimple made with pliers on the aligner at step 6. Following are images of: photographs before treatment, the initial treatment setup, final treatment setup, IPR performed, measurement with a gauge and subsequent closure of the space, dimple on the aligner made with pliers, photographs after treatment, comparison between the initial and final alignment.

Conclusion

Treatment goals were achieved, showing that clear aligners can be an excellent option for this type of orthodontic condition. A predictable result was achieved with a short treatment time, and without any reports of discomfort from the patient. During the retainer phase, a passive aligner was used, and the patient was sent to have a new porcelain crown for tooth 12 prepared.

6.1 Correction of upper incisor crowding

Before photos

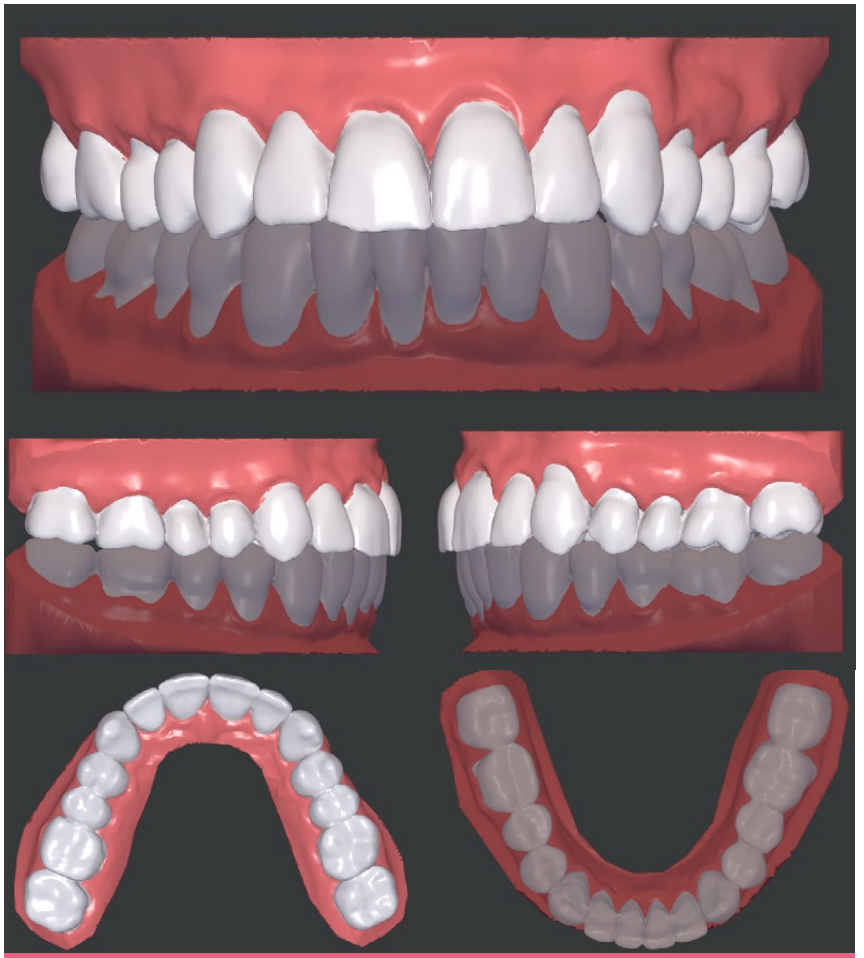


First setup

Images courtesy of Dr. Alexandre Motta

6.1 Correction of upper incisor crowding

Use of a dimple on tooth 21 to refine this



Final setup

Images courtesy of Dr Alexandre Motta

6.1 Correction of upper incisor crowding

After photos

Comparison of Before and After

Images courtesy of Dr Alexandre Motta

6.2 Correction of Class I malocclusion with upper and lower crowding

Dr. Alexandre Motta

Certified by the Brazilian Board of Orthodontics (BBO), Associate Professor of Orthodontics (UFF), Coordinator of the Specialization Course in Orthodontics (UFF), PhD in Orthodontics UERJ/University of North Carolina), Specialist and Master in Orthodontics (UERJ).

Summary

53 1/2-year-old female patient who sought orthodontic treatment, with her chief complaint being “crooked bottom and top front teeth”. Class I relationship was observed with protruding upper incisors. Well-positioned lower incisors, with an accentuated overjet and overbite. Mild upper crowding and moderate lower crowding, with tooth 33 sticking out, protruding and uneven in relation to the upper arch, and with 34 and 35 mesially tipped. The lower midline is deviated 2mm to the left.

Orthodontic Treatment Plan

Alignment and leveling with minor expansion of posterior teeth, avoiding protruding upper incisors. Minor intrusion and proclination of lower incisors and IPR on the lower teeth. Shifting of lower dental midline to the right using the small spaces obtained by proclining the incisors. The use of engagers on teeth 15, 16, 36 and 46, which had porcelain crowns, was avoided. The potential need for an auxiliary extrusive device on 33 after creating space was assessed, due to the difficulty of the movement.

Clinical procedure

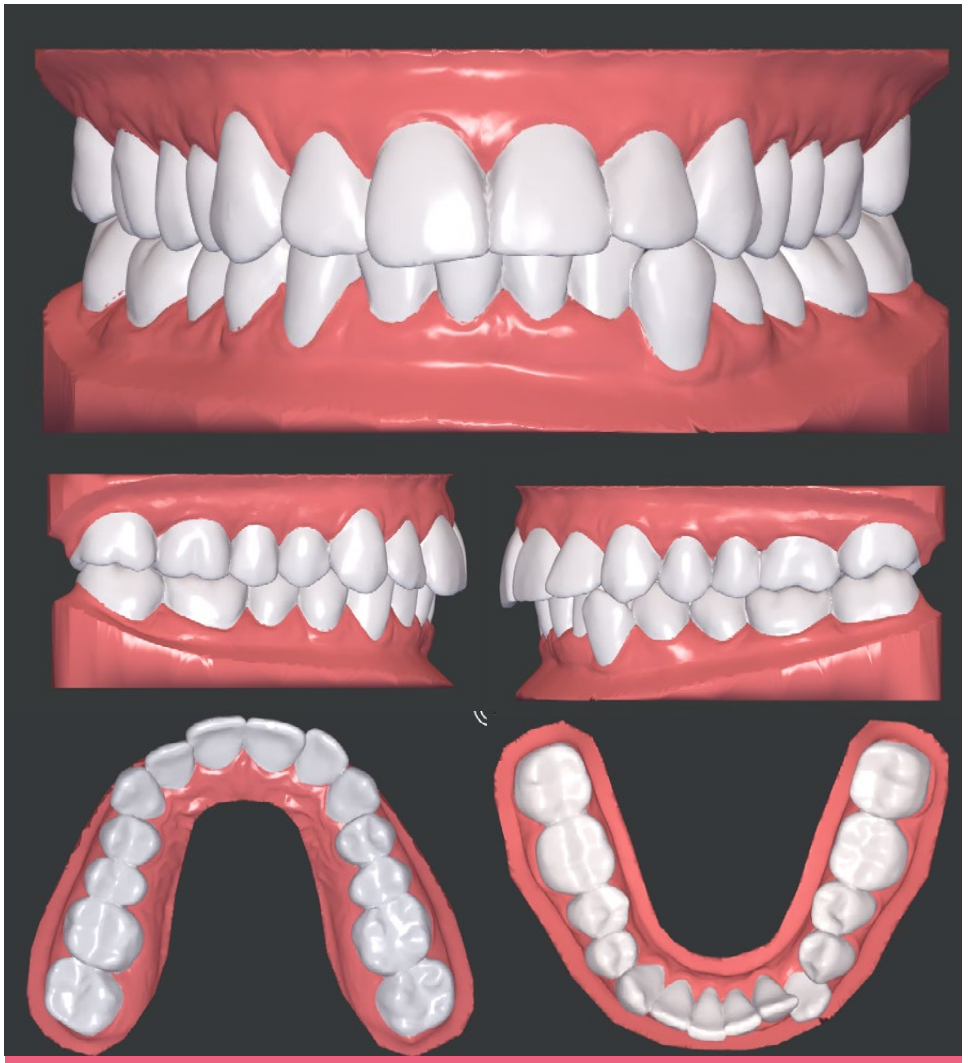
Treatment consisted of a first set of aligners with 15 treatment steps (approximately 7 months), placing 6 engagers on teeth 12, 32, 31, 41, 42 and 43 during the 3rd step and 0.6mm of IPR between teeth 33/34 and 34/35 during the 7th step. The patient was instructed to wear each aligner for a 2-week period, with a monthly follow-up. Following are images of: photographs before treatment, the initial treatment setup, final treatment setup, use of auxiliary device with the aligner trimmed, attaching a button and use of a 3/16” elastic to extrude 33 and 12, comparison of phases showing alignment progress in occlusal view, comparison of phases in front view showing alignment, correction of overbite and midlines.

Conclusion

The main treatment goals were achieved, with a revision being requested at the end of treatment after the first series of aligners. Following the removal of engagers and new scans, a revision treatment setup is created, consisting of a second series of aligners with 6 steps (approximately 3 months). Includes placing an engager on 33 and refining the correction on teeth 33, 34, 35, 13, 12 and 23.

6.2 Correction of Class I malocclusion with upper and lower crowding

Before photos

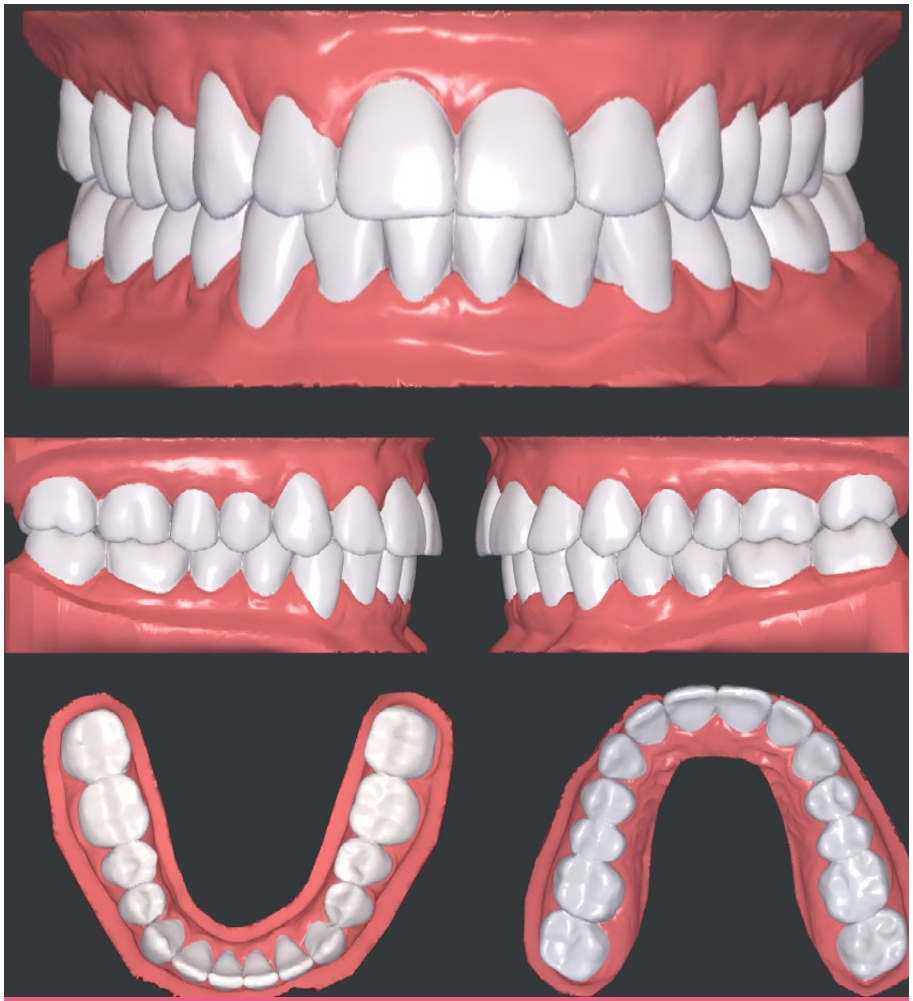


First setup

Images courtesy of Dr. Alexandre Motta

6.2 Correction of Class I malocclusion with upper and lower crowding

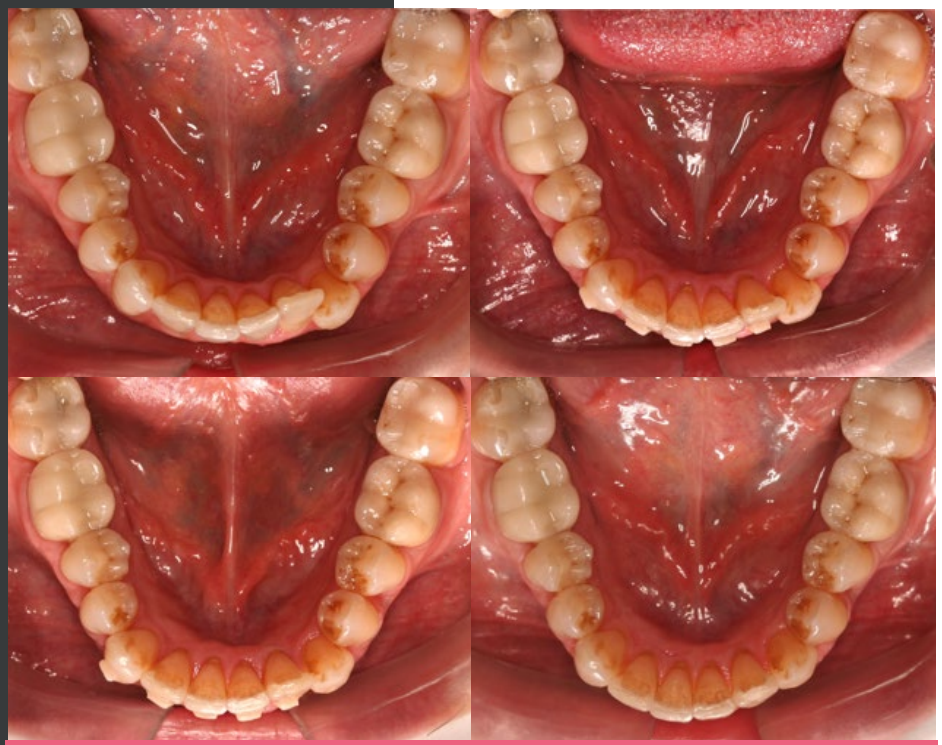
Use of auxiliary device to extrude teeth 12 and 33.



Final setup

Images courtesy of Dr. Alexandre Motta

6.2 Correction of Class I malocclusion with upper and lower crowding



Correction of lower incisor crowding - occlusal view

Correction of lower incisor crowding - front view

Images courtesy of Dr. Alexandre Motta

6.2 Correction of Class I malocclusion with upper and lower crowding

Dr. Ana Cláudia Melo

Master and PhD in Orthodontics from UNESP/Araquara. - Professor of Postgraduate courses at ILAPEO. - Director of Studies, Research and Specialization at ILAPEO.

Summary

29-year-old female patient with multiple missing teeth, who sought restorative treatment with dental implants and implant-supported prostheses. Class I canine relationship with absence of the second lower premolar on the right. Mesial tipping of the first lower molar on the right. Absence of 2nd premolar and 1st lower molar on the left and extrusion of the 1st upper molar on the left were observed on clinical and radiographic examination. Orthodontic treatment prior to restorative treatment was indicated. Initially miniscrew implants were used to upright and intrude lower and upper molars, respectively, followed by treatment with clear aligners. After just over 6 months it was possible to complete the patient's restorative treatment satisfactorily.

Orthodontic Treatment Plan

Treatment was planned in three phases: 1) Small orthodontic movements with the aid of skeletal anchorage - Uprighting of lower molar with miniscrew implant (Neodent, Curitiba, Brazil) and indirect anchorage with cantilever arm; intrusion of 1st upper molar on left with the aid of 2 miniscrew implants. 2) Rehabilitation with dental implants in the left side of the lower arch. 3) Orthodontic treatment with clear aligners to be followed by fitting of further dental implants. Reshaping of the upper and lower arches; distalization of upper molars on both sides.

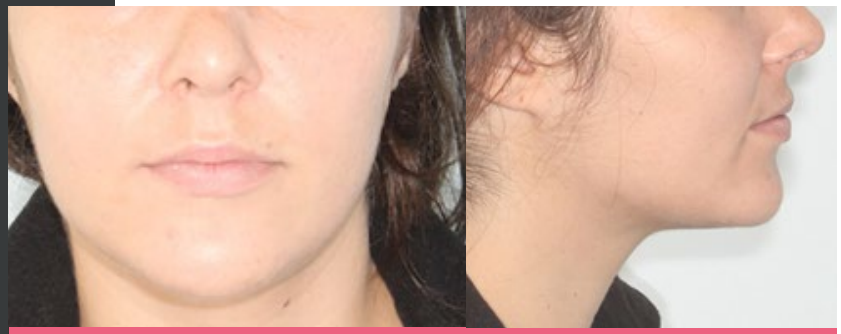
Clinical procedure

The treatment setup was received, in accordance with the specifications described above, and included 13 steps of treatment with aligners (approximately 6 1/2 months), and placing 4 engagers. The patient was instructed to wear each aligner for a 2-week period, with a monthly follow-up. At follow-up appointments, the clinical situation was compared with the treatment setup, the contact and fitting of engagers and/or their integrity was checked.

Conclusion

After 6 and a half months of wearing the aligners, the case was finished. We followed up the aligner treatment with the fitting of dental implants and prostheses on implants in the lower arch (area of tooth 45) and upper arch (area of tooth 25). The patient was extremely satisfied with the end result.

6.3 Treatment with aligners in a patient with multiple missing teeth



Photos before treatment with miniscrew implant and cantilever

Initial panoramic x-ray.

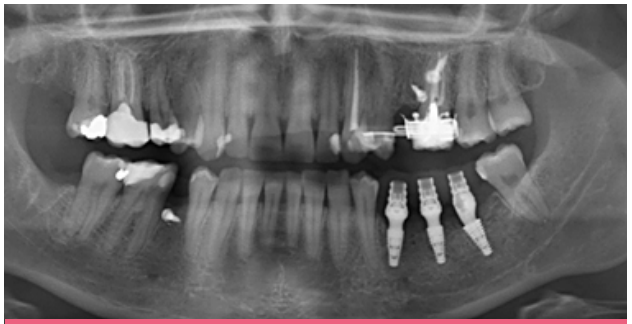
Photos before treatment with miniscrew implant and cantilever

Intrusion appliance on the upper molar on the left

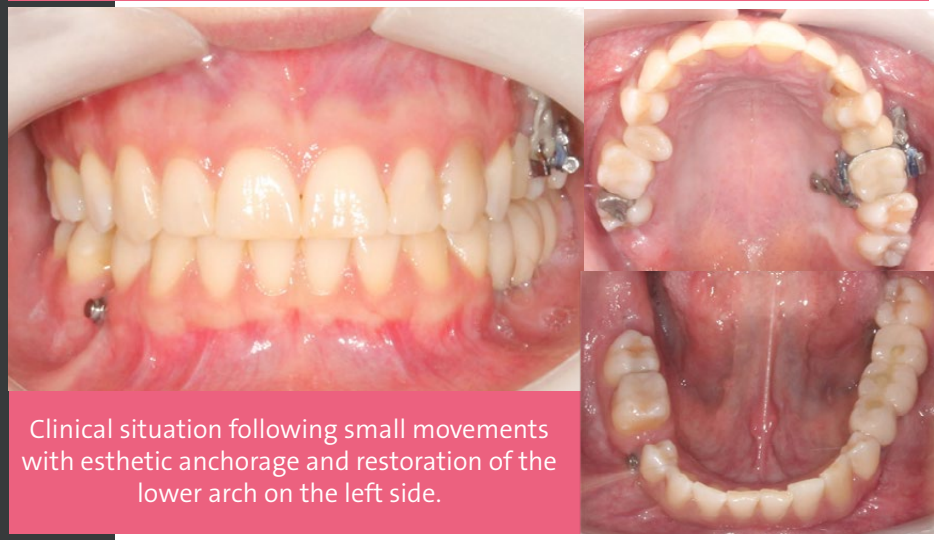
Images courtesy of Dr. Ana Cláudia Melo

6.3 Treatment with aligners in a patient with multiple missing teeth

Appliance for uprighting the lower molar on the right
Using a miniscrew implant and cantilever.



Panoramic x-ray following restoration of the lower arch on the left side.



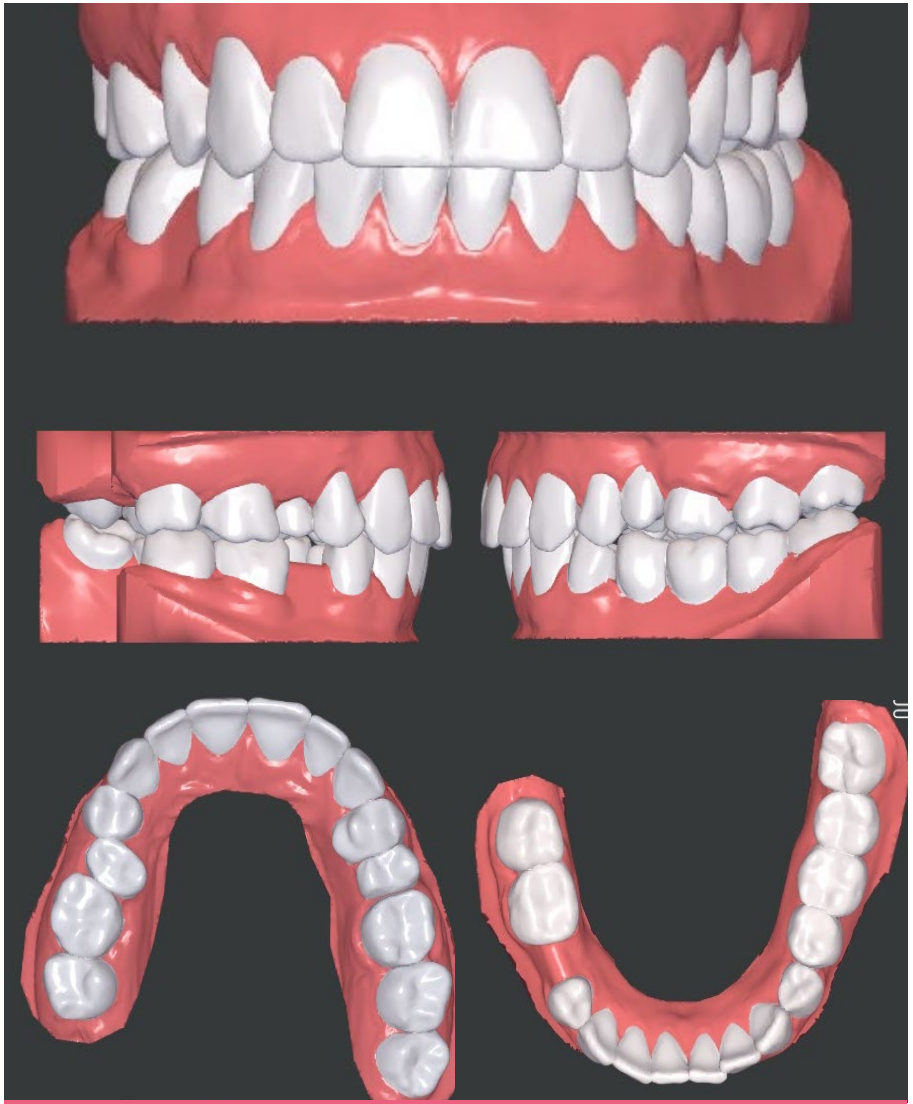
Clinical situation following small movements with esthetic anchorage and restoration of the lower arch on the left side.

Lateral X-ray following restoration of the lower arch on the left side.

Images courtesy of Dr. Ana Cláudia Melo

6.3 Treatment with aligners in a patient with multiple missing teeth

Photos before treatment with aligners

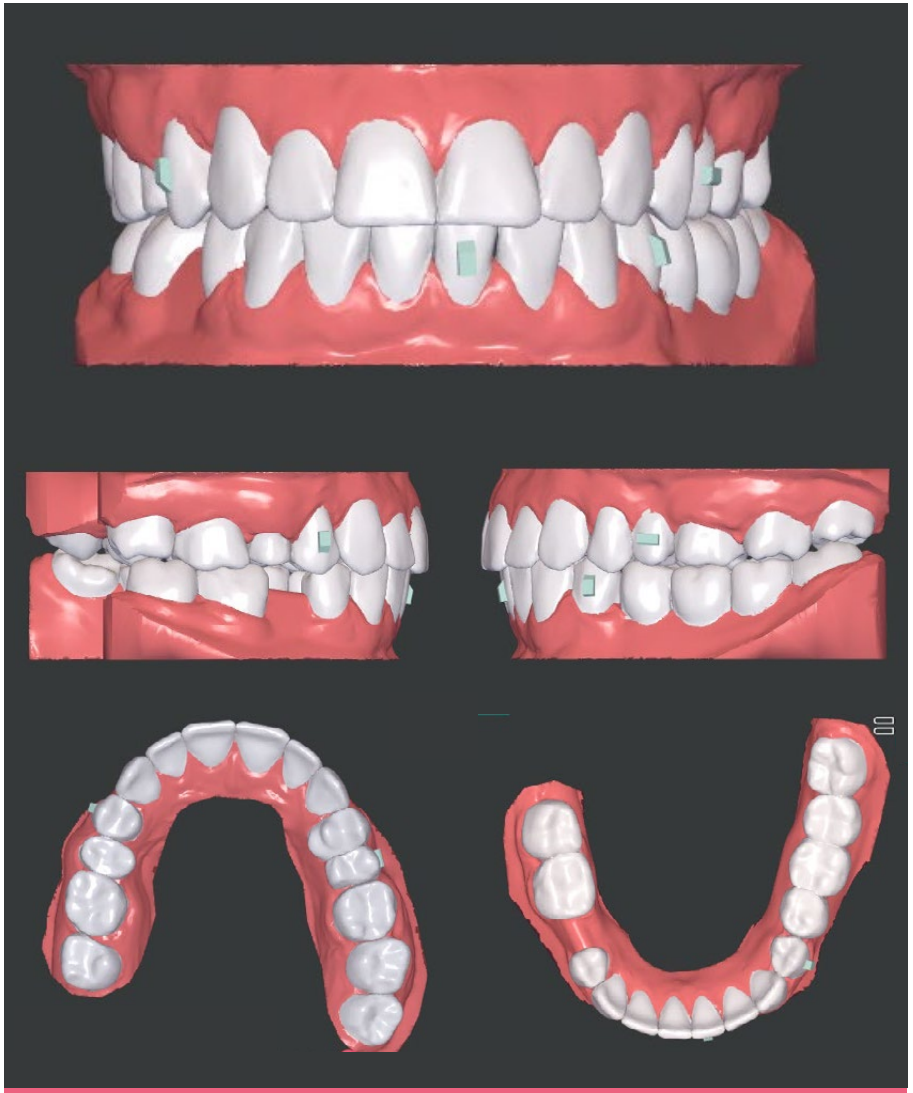


First setup

Images courtesy of Dr. Ana Cláudia Melo

6.3 Treatment with aligners in a patient with multiple missing teeth

Photos after treatment with aligners



Final setup

Images courtesy of Dr. Ana Cláudia Melo

6.4 Orthognathic surgery providing early benefits* followed by treatment with aligners

Dr. Daniel Neves

Trained in Dentistry at PUC-PR. - Specialization in Orthodontics at Northwestern University, Chicago. - Master's Degree from the Graduate School of Northwestern University, Chicago.

Summary

34-year-old female patient. Chief complaint: Patient is dissatisfied with the position of her lips in profile and when smiling. Relapse of previous orthodontic treatment. Patient previously treated with an extraction of the four first premolars from the upper and lower arches.

Orthodontic Treatment Plan

Anticipated orthognathic surgery: clockwise rotation of the occlusal plane, Lefort 1 osteotomy, sagittal split ramus osteotomy and mentoplasty, with Cerabone graft and Jason membrane (both are Straumann Group products). Then, orthodontic treatment using ClearCorrect aligners, with a treatment setup indicating a treatment duration of eight months.

Clinical Procedure

Surgery was successfully carried out, and achieved a significant improvement in the patient's profile, with increased lip volume - resulting in the patient's satisfaction immediately following surgery. This early improvement increased the patient's cooperation and enthusiasm for completing the necessary phases of clear aligner treatment, with a very favorable prognosis.

Conclusion

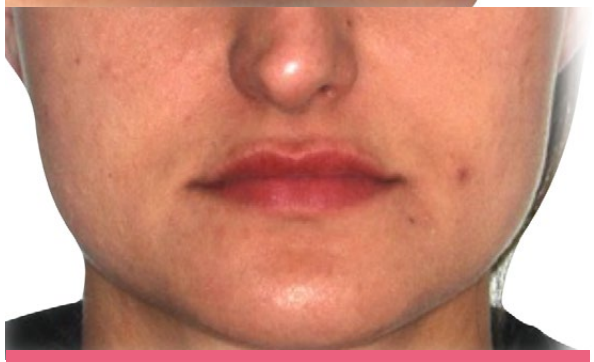
Treatment planning was the cornerstone to achieving a good result. Technology and digital workflow provided us with extremely important tools for making decisions, but the role of the orthodontist and the oral surgeon was crucial in devising and following up on the proposed treatment strategy.

The surgical grafting technique used in planning treatment was published in the following article: **"Bone Graft Wrap Technique: Avoiding accentuated labiodental groove after genioplasty" - Leandro Kluppel, Guilherme Trento, Guilherme Claudino, Alini Sebastiani, Rafaela Scariot**.

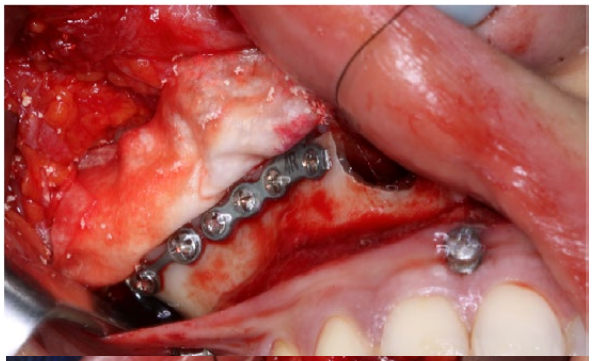
*Nomenclature for specifying the choice to carry out orthognathic surgery before orthodontic treatment.

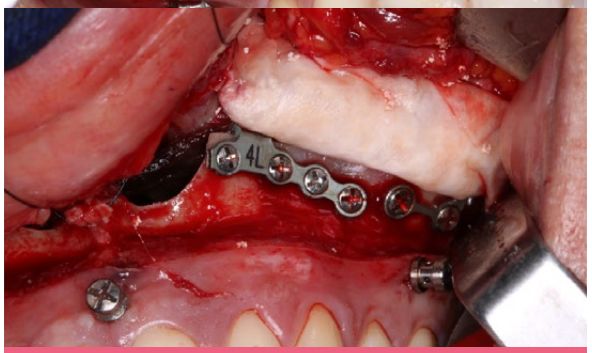
6.4 Orthognathic surgery providing early benefits* followed by treatment with aligners

Full Face photograph taken before treatment
Right Lateral View photograph taken before treatment



Profile before Treatment and Full Face before Treatment

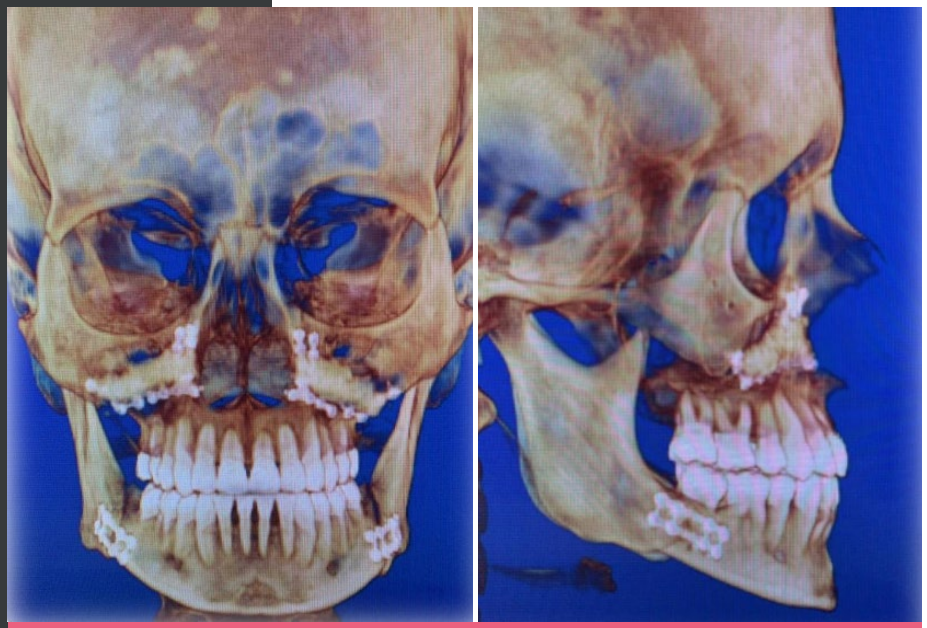




Lefort 1 osteotomy and graft placement. “Bone Graft Wrap Technique” - Leandro Kluppel, et. al.

Images courtesy of Dr. Daniel Neves

6.4 Orthognathic surgery providing early benefits* followed by treatment with aligners

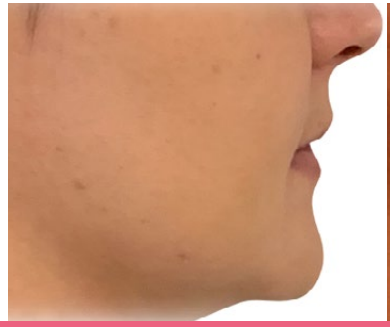


Post-surgical CT

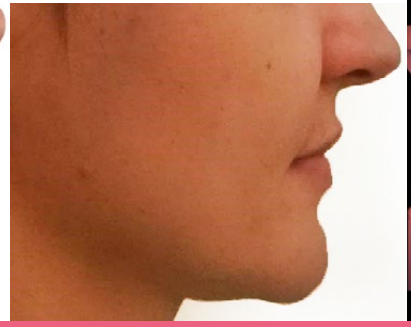
Pre-surgical radiograph

Post-surgical radiograph

Pre-surgical facial profile



Facial profile 10 days after surgery



Facial profile 4 months after surgery

ClearCorrect treatment setup - after step 16

Images courtesy of Dr. Daniel Neves

6.5 Class II with spacing; Orthodontic Relapse

Dr. Daniel Neves

Trained in Dentistry at PUC-PR. - Specialization in Orthodontics at Northwestern University, Chicago. - Master's Degree from the Graduate School of Northwestern University, Chicago.

Summary

18-year-old female patient. Chief complaint: Gaps between her teeth. Patient had already undergone orthodontic treatment previously and was not motivated to use a fixed appliance again.

Orthodontic Treatment Plan

Use of ClearCorrect aligners for 8 months (16 steps), with maximum posterior anchorage and retraction of the anterior segment to adjust the points of contact and tooth inclination.

Clinical Procedure

Patient extremely cooperative and totally suited to and happy with the clear aligner technique, as it combines comfort and esthetics, according to the patient. Following the 6 - 12 weeks of planned treatment - we can observe movement absolutely identical to that outlined in the treatment setup. The canine relationship is already Class I, with stable anchorage of the posterior segment.

Conclusion

Aligner technology proves effective in anchoring and distalizing canines, providing "isolated" movements in specific segments. With good treatment planning, the patient's cooperation and appropriate monitoring, we achieved the planned movements and combined comfort and esthetics, according to the patient.

6.5 Class II with spacing; Orthodontic Relapse

Before photo, left lateral view and upper occlusal view

Photograph of the patient and treatment setup, upper left lateral view after 12 weeks - Step 6

Photograph of the patient and treatment setup, upper occlusal view after 12 weeks - Step 6

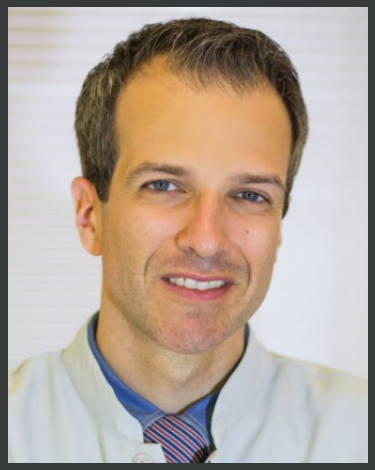
Images courtesy of Dr. Daniel Neves

6.5 Class II with spacing; Orthodontic Relapse

After photos

Images courtesy of Dr. Daniel Neves

6.6 Minor lower incisor leveling and alignment, maintaining occlusal stability



Dr. Gabriel Dolci

Master's Degree in Orthodontics and Facial Orthopedics - PUCRS. - Professor of the Postgraduate Orthodontics Program of the Brazilian Society of Dental Surgeons, Porto Alegre. - Coordinator of the Postgraduate Orthodontics Program of São Leopoldo Mandic, Porto Alegre. - Specialization in Public Health - UFRGS.

Summary

46-year-old female patient whose chief complaint was lower incisor crowding. Clinical examination showed: (a) loss of tooth 46 and resulting dental collapse in esthetics; (b) Class II subdivision malocclusion on right side; (c) excessive overbite; (d) backward incline of lower incisors; (e) lower incisor crowding.

Orthodontic Treatment Plan

Maintain Class II relationship, expand the maxillary and mandibular arches transversally, correct overbite by relative intrusion of lower incisors and correct lower incisor crowding. With the above instructions the treatment setup was outlined as follows: - Total number of steps: 12 - 3-week wear schedule (option selected by the orthodontist); - Anticipated Treatment Time: 9 months; - Number of Engagers: 2 (teeth 33 and 44) - Total IPR (interproximal reduction): 0.9mm (teeth 11-12-13/23-24). Unlimited treatment option chosen based on it offering greater freedom to carry out any necessary revisions.

Clinical procedure

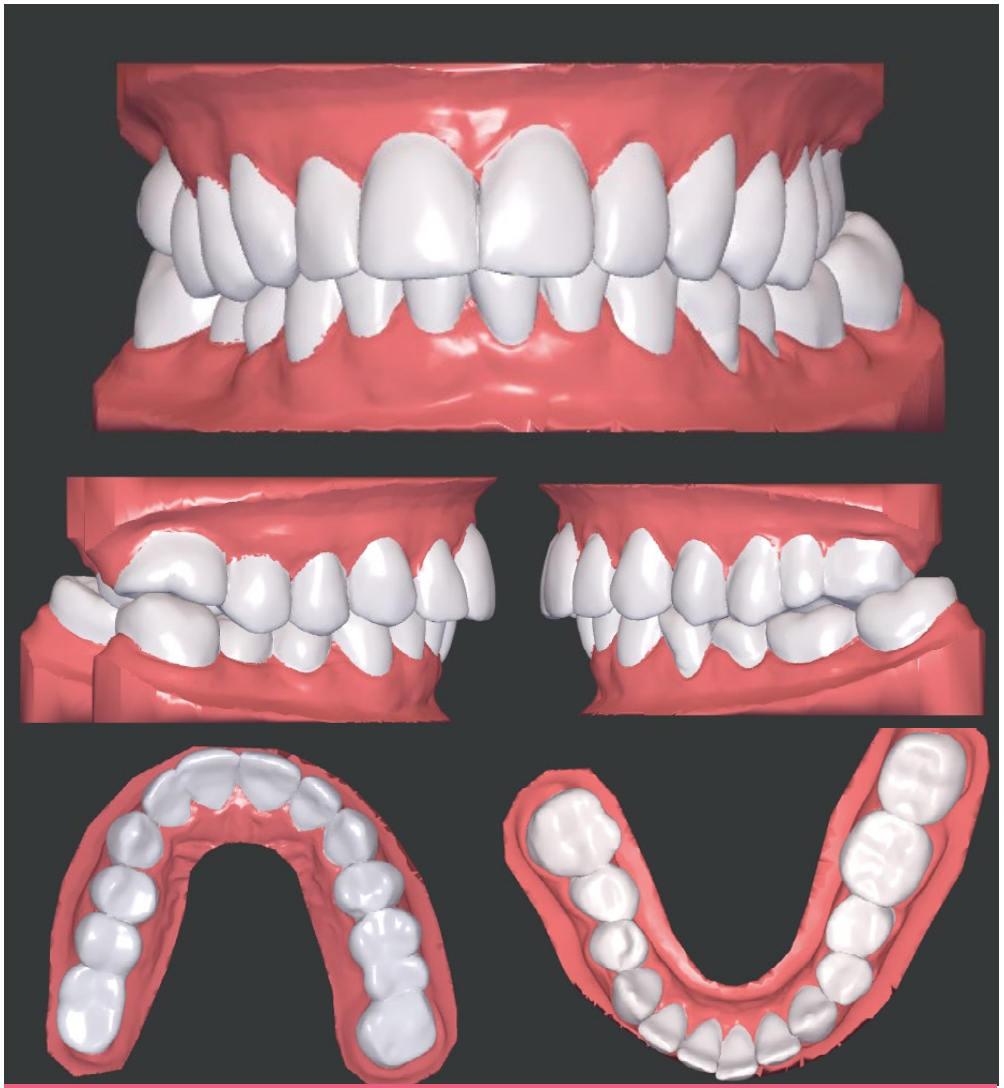
All aligner changes were done at the practice, every 21 days. Before fitting the aligners, they were ground down in the posterosuperior cervical region, with the aim of reducing retention in areas of prosthetic restoration. The biggest complication on this case was the engager falling off in the region of 44. It is thought that this was due to two factors: 1) crown anatomy (increased convexity) and; 2) Widespread chipping of enamel, exactly in the area where the engager was glued. The use of a hybrid device (with buttons) was suggested to correct the tipping of 44, although the patient did not agree to this proposed solution.

Conclusion

In this case the tooth movements planned in the treatment setup were achieved with a satisfactory orthodontic outcome after 9 months, without the need for revision.

6.6 Minor lower incisor leveling and alignment, maintaining occlusal stability

Before photos

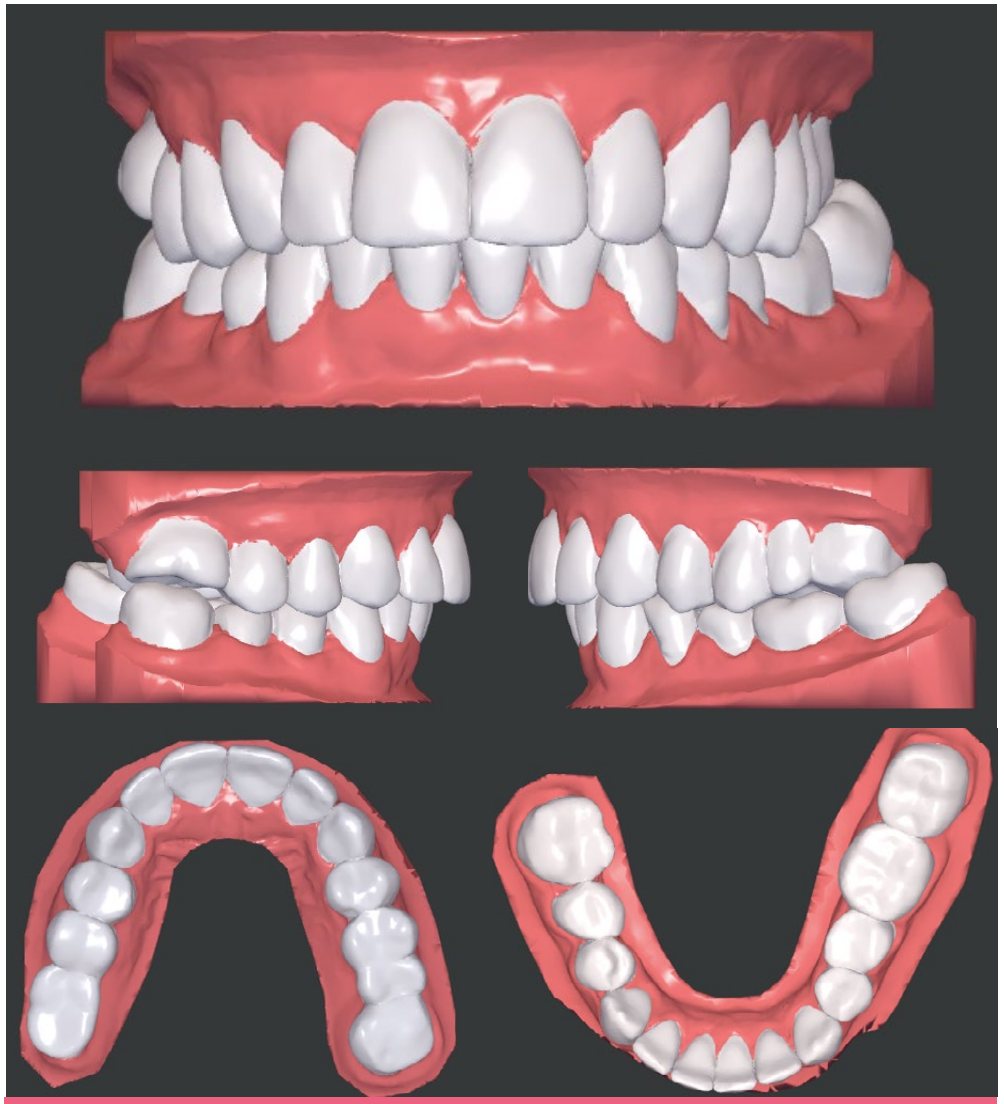


First setup

Images courtesy of Dr. Gabriel Dolci

6.6 Minor lower incisor leveling and alignment, maintaining occlusal stability

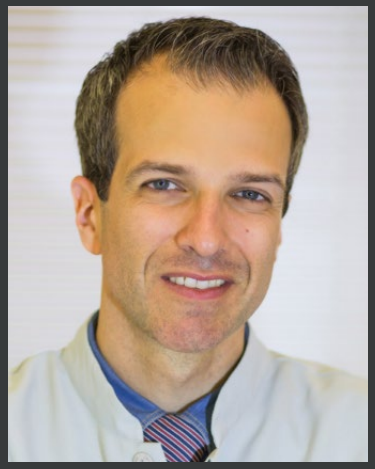
After photos



Final setup

Images courtesy of Dr. Gabriel Dolci

6.7 IPR and expansion of [Maxillary] arches with strategies for correcting Lower crowding



Dr. Gabriel Dolci

Master's Degree in Orthodontics and Facial Orthopedics - PUCRS. - Professor of the Postgraduate Orthodontics Program of the Brazilian Society of Dental Surgeons, Porto Alegre. - Coordinator of the Postgraduate Orthodontics Program of São Leopoldo Mandic, Porto Alegre. - Specialization in Public Health - UFRGS.

Summary

44-year-old female patient who presented with her chief complaint being her moderate lower incisor crowding. Clinical and radiographic examination showed: (a) absence of teeth 16 and 26 with significant bone loss in this region; (b) Class I malocclusion; (c) excessive overbite; (d) 4.5mm dentoalveolar discrepancy of lower arch; (e) black triangle between 11 and 21; (f) accentuated mesial tipping of crown of tooth 11 (causing uneven incisal edges between 11 and 12); (g) localized diastemata (between teeth 21-22-23); (h) proclination of upper and lower incisors.

Orthodontic Treatment Plan

The main strategy for correcting crowding was to perform interproximal reduction (IPR) on the lower arch, followed by gentle expansion of the mandibular and maxillary arches (only in the region of the canines and premolars). With the above instructions the treatment setup was outlined as follows: - Total number of steps: 10 - 3-week wear schedule (option selected by the orthodontist); - Anticipated Treatment Time: 7 months; - Number of Engagers: 8 (teeth 13, 11, 22, 23, 43, 42, 33 and 32* - *lingual) - Total IPR (interproximal reduction): 4.3mm (teeth 13-12, 11-21-12, 34-33-32-31-41-42-43-44).

Clinical procedure

Due to the patient's periodontal condition, it was decided to change aligners at the practice, every 21 days. The biggest complication in this case was the patient's lack of cooperation, over a 1-month period, culminating in poor fit of the aligners. In order to reestablish a normal fit, it was necessary to go back to using previous aligners, as recommended by the strategy known as "backtracking".

Conclusion

After 9 months of treatment the case was finalized within the planned expectations.

6.7 IPR and expansion of [Maxillary] arches with strategies for correcting Lower crowding

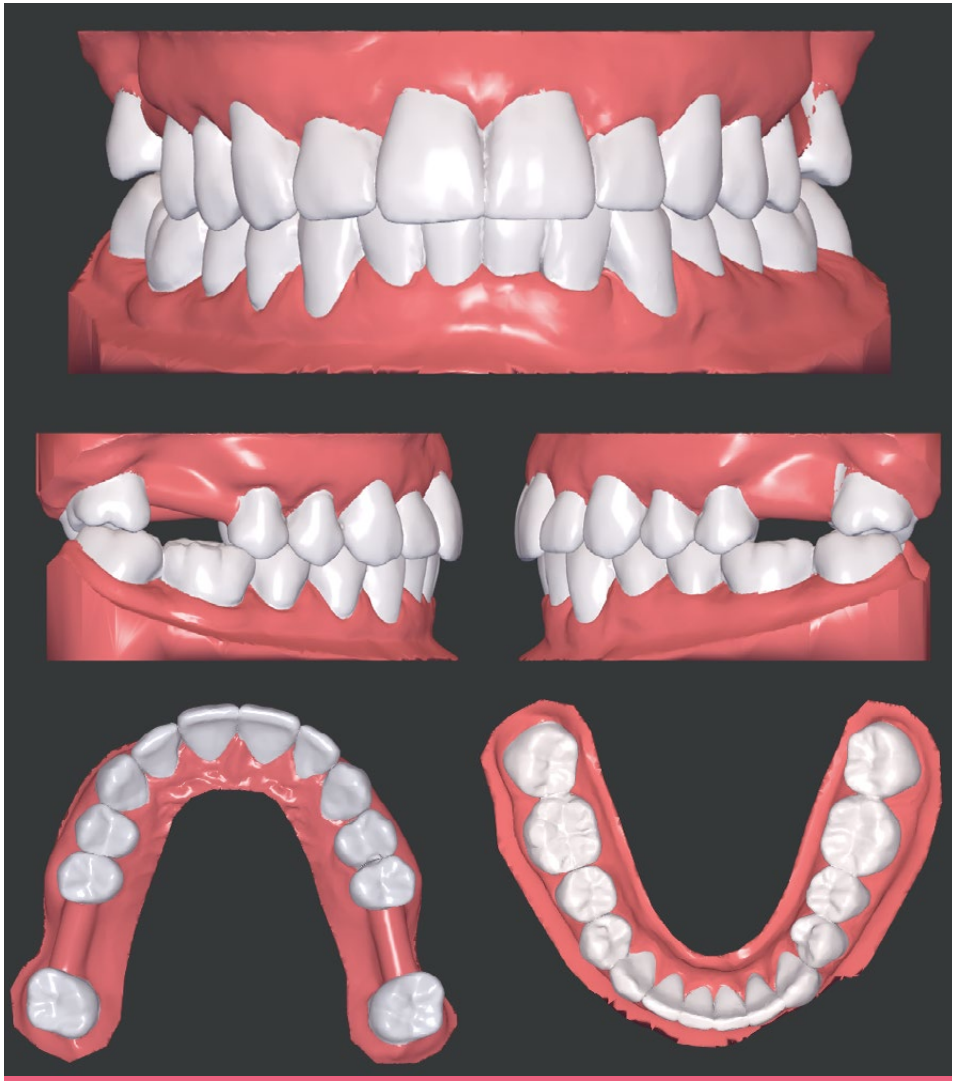
Before photos

First setup

Images courtesy of Dr. Gabriel Dolci

6.7 IPR and expansion of [Maxillary] arches with strategies for correcting Lower crowding

Intraoral images after treatment



Final setup

Images courtesy of Dr. Gabriel Dolci

6.8 Uprighting and mesialization of molars

Dr. Henrique Naoe

Specialist in and Master of Orthodontics; Professor of the Course in Dentistry offered by UniBrás - Rio Verde/GO, Coordinator of the Specialist Course in Orthodontics - Postgraduate Complex Rio Verde/GO, Guest Professor of Specialist Courses in Orthodontics; Founder Member and Science Director - ONE - World-class Training Courses.

Summary

60-year-old female patient in good health, who reports being bothered by the gaps in her back teeth and presents with a Class I Malocclusion with some diastema. The back teeth were slightly extruded due to tooth loss.

Orthodontic Treatment Plan

The patient opted not to have a bone graft (sinus lift) in the region of 16, opting for mesialization of 17 and a posterior implant in the region of 17 to stabilize and mesialize teeth 47 and 48 by means of orthodontic treatment. Tooth 47 does not mesialize easily, an orthodontic miniscrew implant with cantilever will be fitted.

Clinical procedure

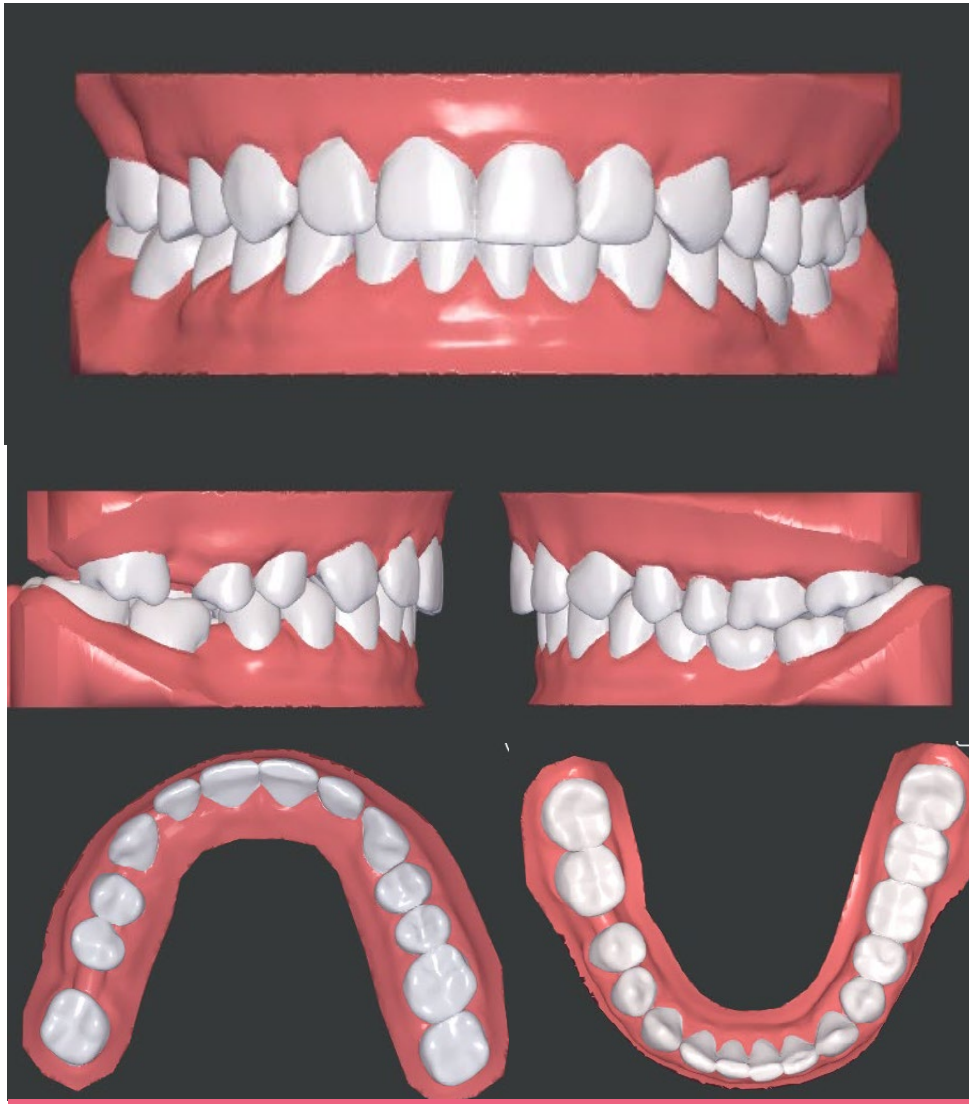
Aligner treatment comprised 20 steps (approximately 10 months) without any engagers being placed. At step 12 we noted non-tracking of tooth 47, at which point new scans were submitted for a revision. Updated treatment setup now 23 steps. The new plan also included engagers on teeth 17 (palatal surface) and 47 (buccal surface).

Conclusion

After 8 and a half months, the case is ongoing with step 16, when mesialization and uprighting of the aforementioned teeth is established. The patient says she is extremely satisfied with the results so far.

6.8 Uprighting and mesialization of molars

Before photos

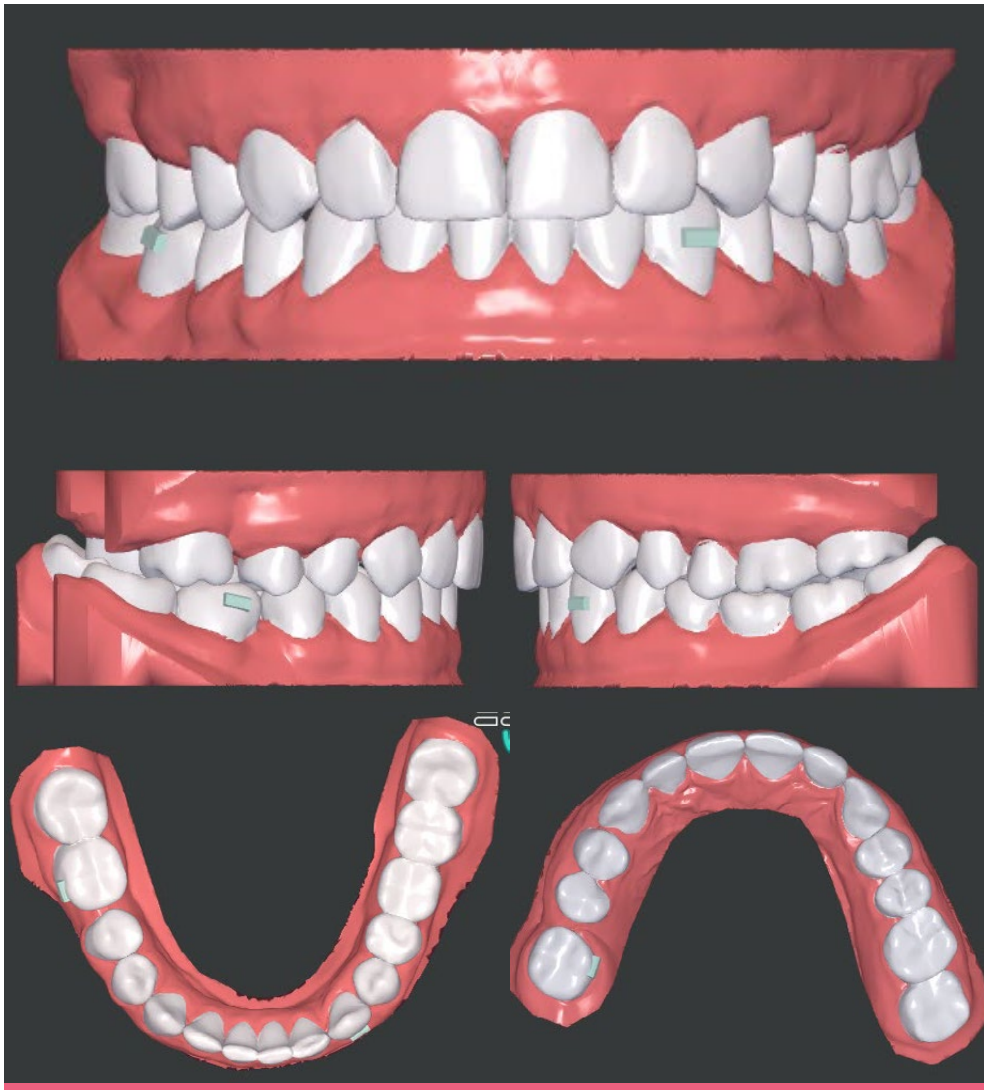


First setup

Images courtesy of Dr. Henrique Naoe

6.8 Uprighting and mesialization of molars

Progress photos - step 14



Setup - step 14

Images courtesy of Dr. Henrique Naoe

6.9 Mesialization and incisor crowding

Dr. Henrique Naoe

Specialist in and Master of Orthodontics; Professor of the Course in Dentistry offered by UniBrás - Rio Verde/GO, Coordinator of the Specialist Course in Orthodontics - Postgraduate Complex Rio Verde/GO, Guest Professor of Specialist Courses in Orthodontics; Founder Member and Science Director - ONE - World-class Training Courses.

Summary

27-year-old female who report being bothered by crowded teeth and missing tooth 46. She has a supernumerary tooth between 34 and 35. She presents with a Class I malocclusion and facial classification I.

Orthodontic Treatment Plan

The patient opted for interproximal reduction (IPR) in the anterior region and mesialization of tooth 46, keeping the supernumerary tooth (being monitored radiographically).

Clinical procedure

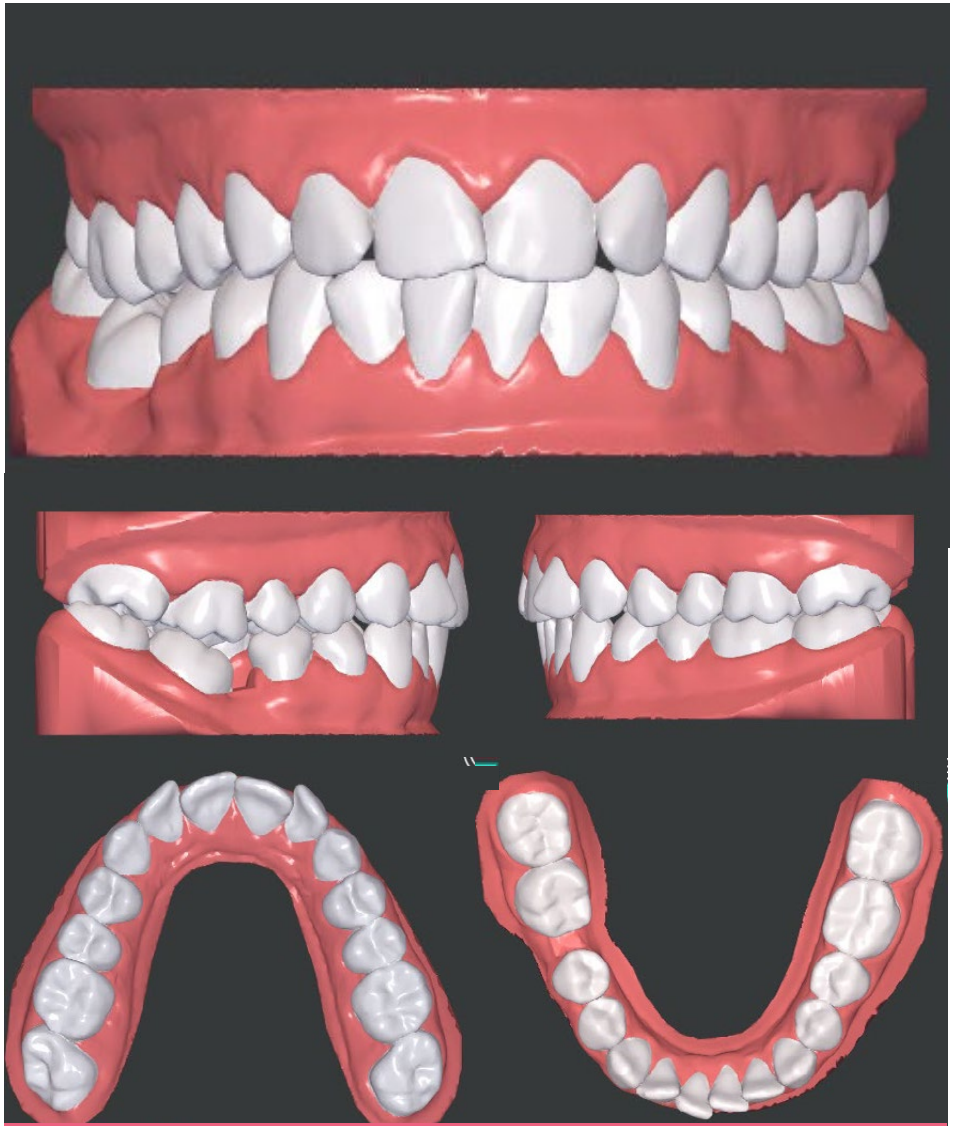
Aligner treatment comprised 22 steps (approximately 11 months) with engagers being placed. At step 12, non-tracking of tooth 47 was noted.

Conclusion

After 6 months, the case is ongoing at step 12. Mesialization of the aforementioned teeth and correction of crowding is being established, in accordance with the treatment setup. The patient says she is extremely satisfied with the results so far.

6.9 Mesialization and incisor crowding

Before photos

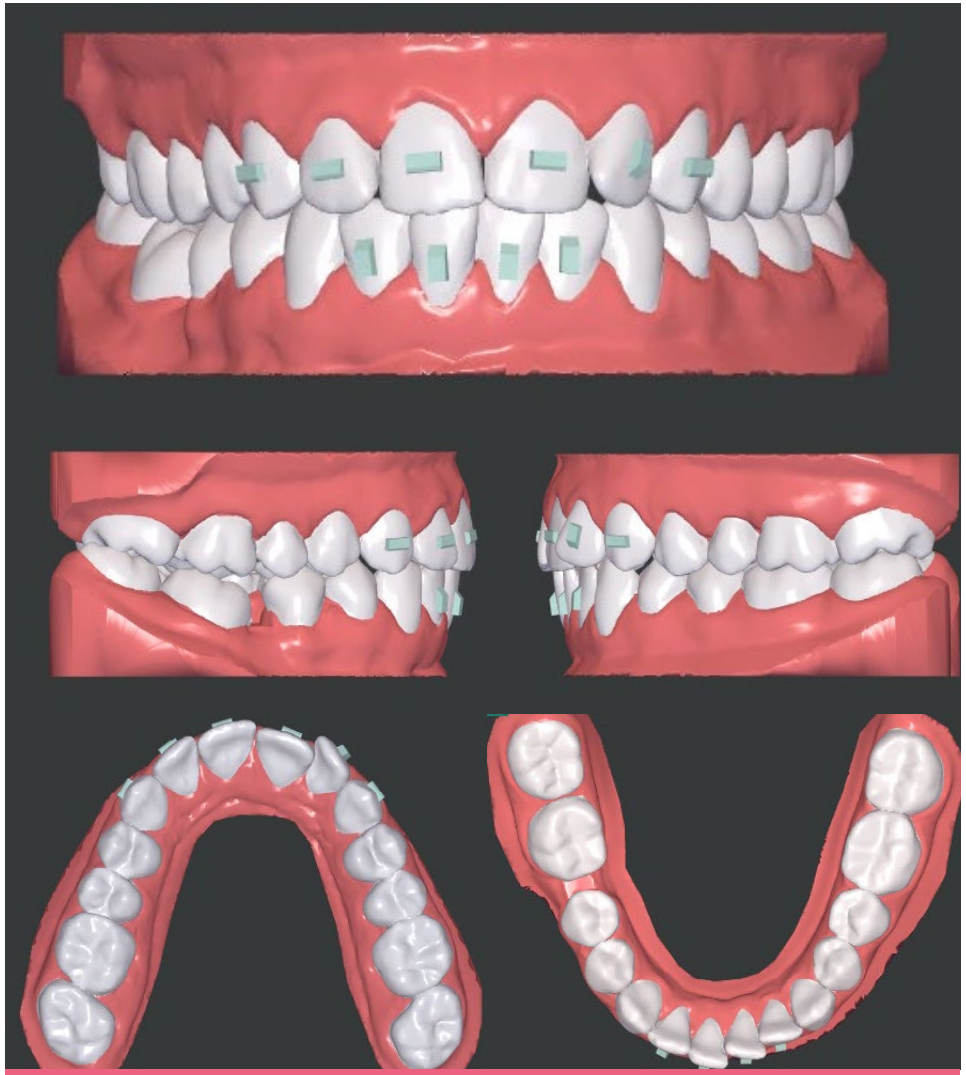


First set-up

Images courtesy of Dr. Henrique Naoe

6.9 Mesialization and incisor crowding

Progress photos - step 7



Setup - step 7

Images courtesy of Dr. Henrique Naoe

6.10 Class II anterior open bite

Dr. Henrique Naoe

Specialist in and Master of Orthodontics; Professor of the Course in Dentistry offered by UniBrás - Rio Verde/GO, Coordinator of the Specialist Course in Orthodontics - Postgraduate Complex Rio Verde/GO, Guest Professor of Specialist Courses in Orthodontics; Founder Member and Science Director - ONE - World-class Training Courses.

Summary

29-year-old female in good health who reports being bothered by an anterior open bite that exposes many teeth when smiling, without drying of the lips. She presents with a Class I molar relationship and Class II canine relationship on the left.

Orthodontic Treatment Plan

The patient opted for interproximal reduction (IPR) and engagers on some of her front teeth.

Clinical procedure

Aligner treatment comprised 11 steps (approximately 5 and a half months) with engagers being placed.

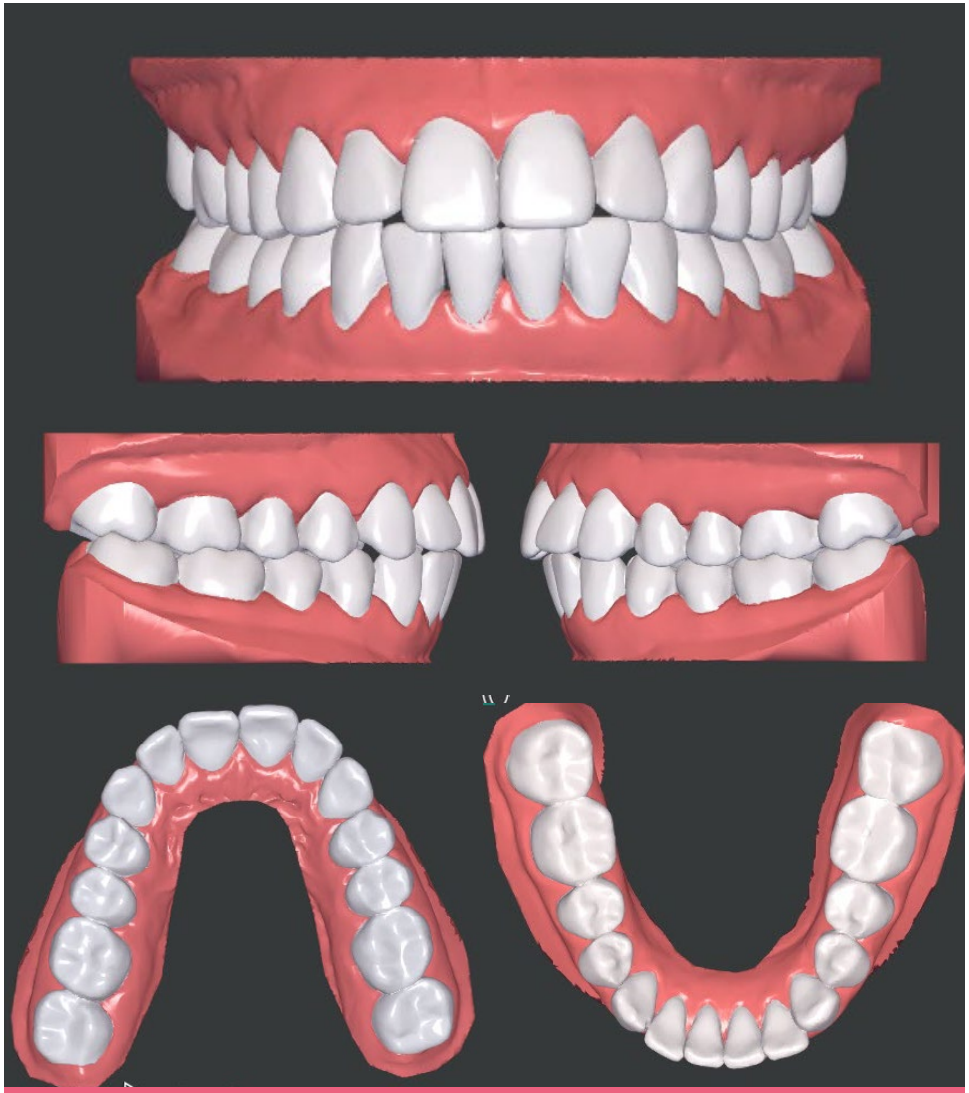
Conclusion

After 5 and a half months of treatment, the case was finalized at step 11, when we established that movements were achieved according to the treatment setup. The patient says she is extremely satisfied with the results so far.

Retention: Used 24/24, we will carry out an assessment in 6 months; if necessary we will request new retainers.

6.10 Class II anterior open bite

Before photos

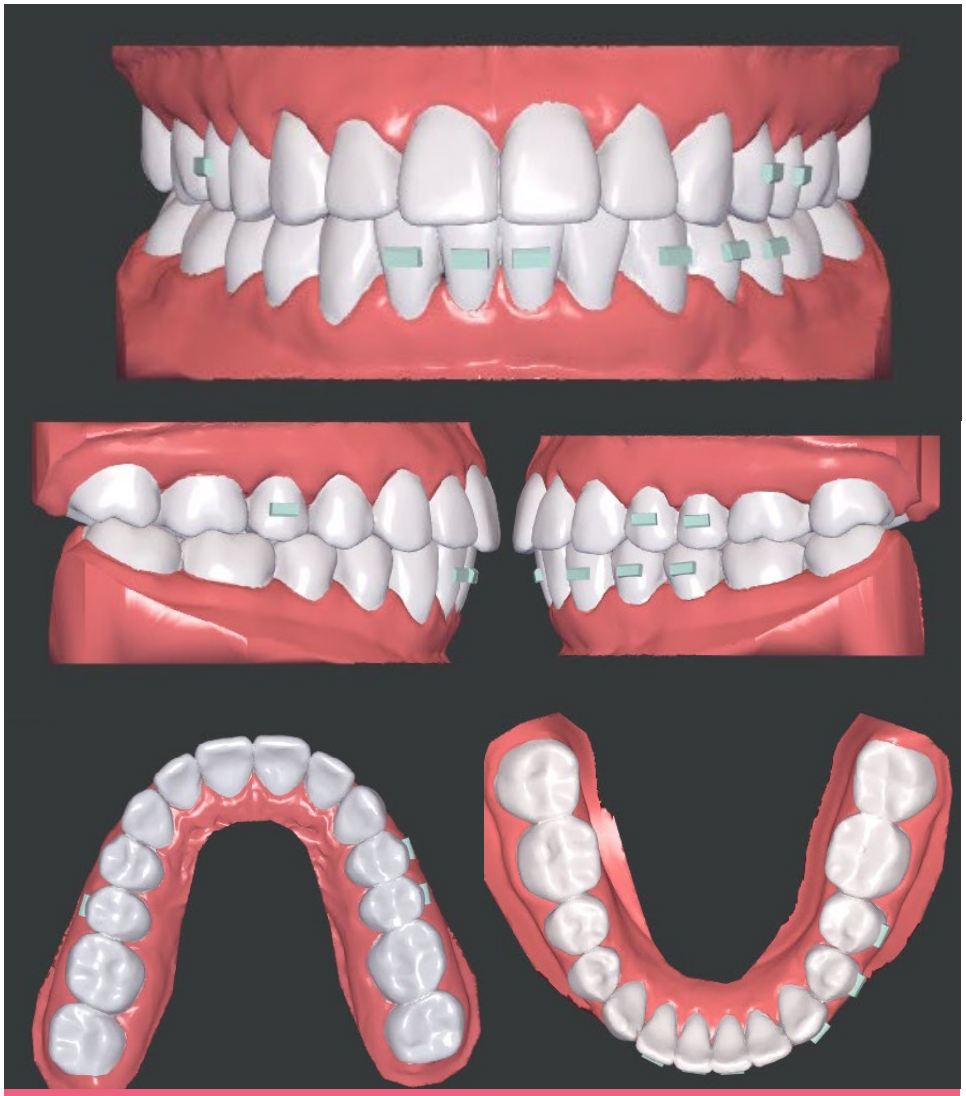


First setup

Images courtesy of Dr. Henrique Naoe

6.10 Class II anterior open bite

Progress photos - step 10



Setup - step 10

Images courtesy of Dr. Henrique Naoe

6.11 Correction of Class I Malocclusion

Dr. Isabela Shimizu

Doctor of Health Sciences - PUCPR School of Medicine - Master of Orthodontics,PUCPR. - Specialist in TMD and Orofacial Pain, UTP. - Professor of Courses on Orofacial Harmonization at ILAPEO. - Professor of the Specialist Course in Orthodontics at ILAPEO.

Summary

32-year-old female who previously underwent orthodontic treatment during adolescence, but did not wear the post-treatment retainer. Chief complaint: Lower incisor crowding and misalignment of tooth 11. The patient presented with a Class I malocclusion, skeletal Class I SNA=81°, SNB=78°, ANB=3°; Brachyfacial (FMA=22°) Class I Canine Relationship, 50% overbite, 2mm overjet, small midline deviation to the right (0.3mm), mild protrusion of tooth 11, moderate lower incisor crowding. Upper and lower incisors protruding buccally. (1.NA= 30º, 1-NA=6mm, 1.NB= 30.5º, 1-NB= 5.75mm, IMPA= 101.5º).

Orthodontic Treatment Plan

It was planned to align and level the arches, slightly expanding these to increase the perimeter, with space to correct the upper and lower incisor crowding and correct the midline deviation. It should be noted that as the patient presented with protruding upper and lower incisors, these teeth need to be uprighted and this will require interproximal reduction on the upper and lower arch and distalization of the canines.

Clinical procedure

According to the treatment setup, the total number of steps was 14, with aligners being changed every 2 weeks, and the treatment time was 7 months. The arches were expanded slightly, with slight uprighting of the upper and lower incisors; IPR was performed on the following upper teeth: between 13 and 14, 14 and 15, 23 and 24, 24 and 25; and on the lower arch between teeth: 32 and 33, 33 and 34, 42 and 43 and 43 and 44 – totaling 3.9mm. Engagers were placed on 8 teeth: 17, 22, 23, 33, 32, 41, 43 and 44.

Conclusion

After 7 months of wearing aligners, the case was finished, achieving the anticipated results, with correction of lower incisor crowding, tipping of tooth 11 and correction of upper arch midline deviation. The patient was extremely satisfied with the end result.

6.11 Correction of Class I Malocclusion

Extraoral photographs taken before treatment
(full face, full face smiling and profile)

X-ray of Profile View and X-ray of Profile View Panoramic Radiograph

Before photos

Images courtesy of Dr. Isabela Shimizu

6.11 Correction of Class I Malocclusion

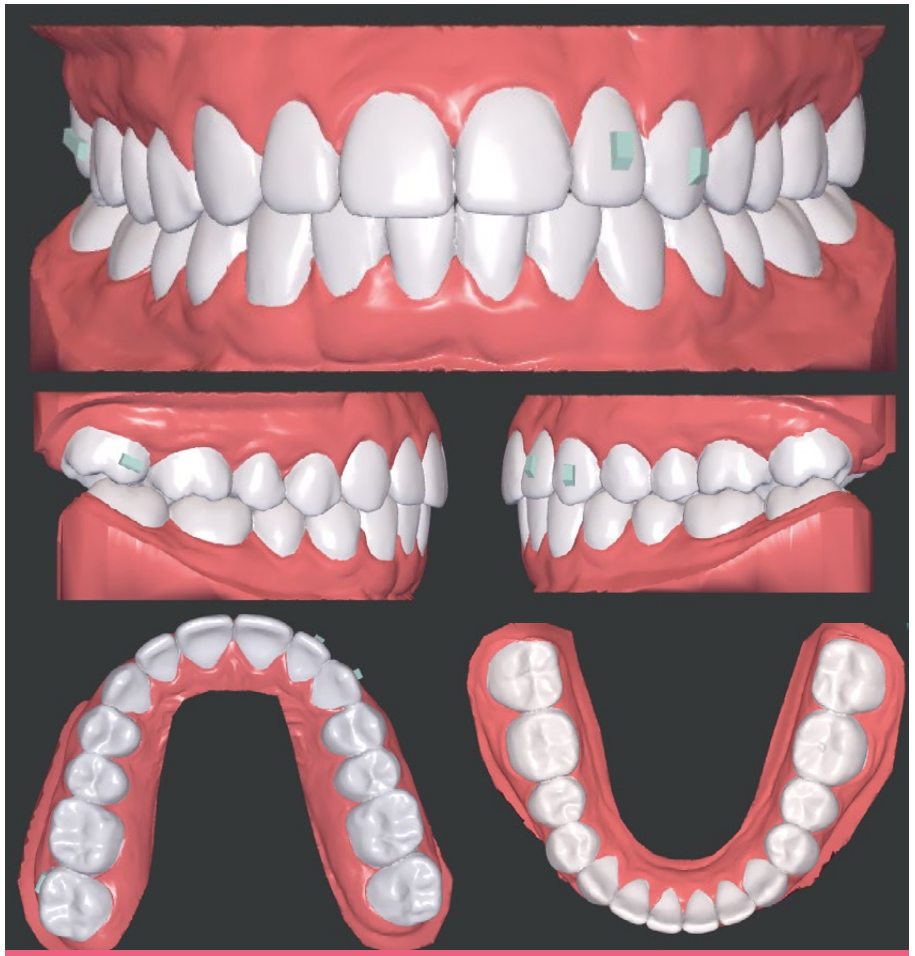
First setup

Progress photos - step 12

Images courtesy of Dr. Isabela Shimizu

6.11 Correction of Class I Malocclusion

Comparison between the initial step of treatment and step 12.



Final setup

Images courtesy of Dr. Isabela Shimizu

6.12 Interaction between ClearCorrect Aligners and Prosthesis

Dr. Roberto Shimizu

Master, Doctor and Post-doctorate in Orthodontics awarded by the Araraquara Faculty of Dentistry - UNESP. - Professor of Orthodontics at UTP-PR and ILAPEO. - Coordinator of the Postgraduate Course in Orthodontics at UTP-PR and ILAPEO.

Summary

56-year-old female presents with a Class I malocclusion, skeletal Class III, brachycephalic, small lower anterior facial height, 3mm overjet and accentuated overbite. Generalized occlusal wear (grinding of teeth), straightened, extruded upper incisors, straightened lower incisors and significant wear to incisors. 1mm midline deviation to the right, root canal treatment on teeth 34, 36, 37, 46 and 47, dental implants in teeth 15 and 25, prostheses in teeth 15, 25, 34, 36, 37 and 46, absence of teeth 18, 28, 38 and 48. The upper incisors had their incisal edges level with the bottom of the top lip, being virtually unexposed when speaking. The purpose of treatment was to make it possible to restore the back teeth (which will be carried out after orthodontic treatment) and to improve tooth exposure when speaking and smiling.

Orthodontic Treatment Plan

Before scanning was carried out, a posterior bite lift was performed by increasing the height of crowns 16, 17, 26 and 27, with the aim of partially reestablishing the loss of vertical dimension caused by grinding the teeth. The upper incisors, canines and first premolars were extruded (using the implants on teeth 15 and 25 as anchorage) and the lower incisors, canines and first premolars were intruded in order to correct the overbite. In this way, the overbite was corrected, and exposure of the upper incisors was increased. The proclination of the lower incisors was increased with the aim of reducing the interincisal angle and improving the stability of the overbite correction. When planning, we prioritized leveling the gum line and therefore the lower incisors ended up with a notch on the incisal edges, for cosmetic restoration later.

Clinical procedure

We started treatment with a posterior bite lift. Treatment was completed in 8 months, since it involved 16 steps and aligners were changed every 2 weeks. It was not necessary to perform interproximal reduction (IPR). Very important were the engagers on the upper teeth that provided retention during extrusion (critical for aligners) and to lower teeth, used to bring about simultaneous proclination, intrusion and rotation. The treatment did not involve any complications.

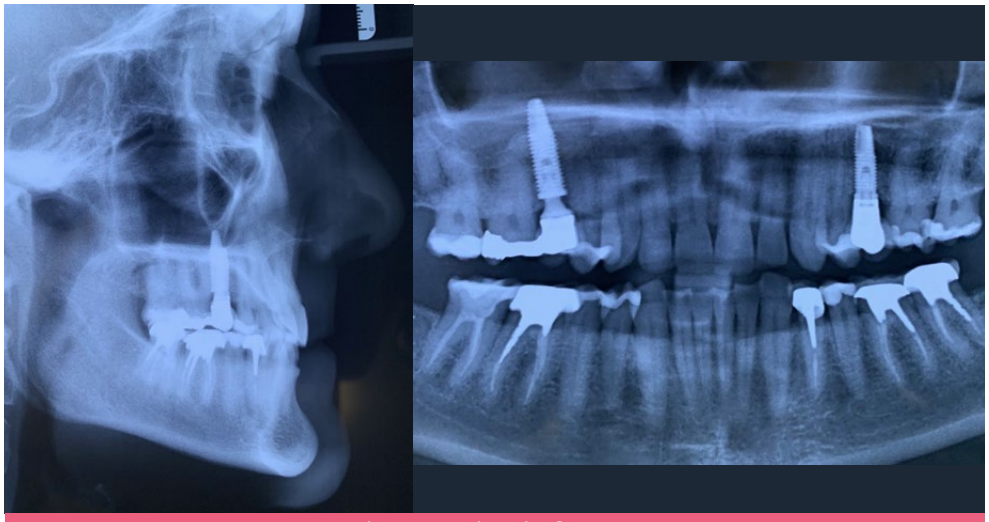
Conclusion

The treatment considered the needs of the patient and of the clinician who will carry out the restoration post clear aligner treatment. The thing that made the greatest difference in successfully completing the treatment was the posterior bite lift, extrusion of the upper teeth and excellent collaboration on the part of the patient.

6.12 Interaction between ClearCorrect Aligners and Prosthesis

Intraoral photographs taken before treatment

Extraoral photographs taken before treatment

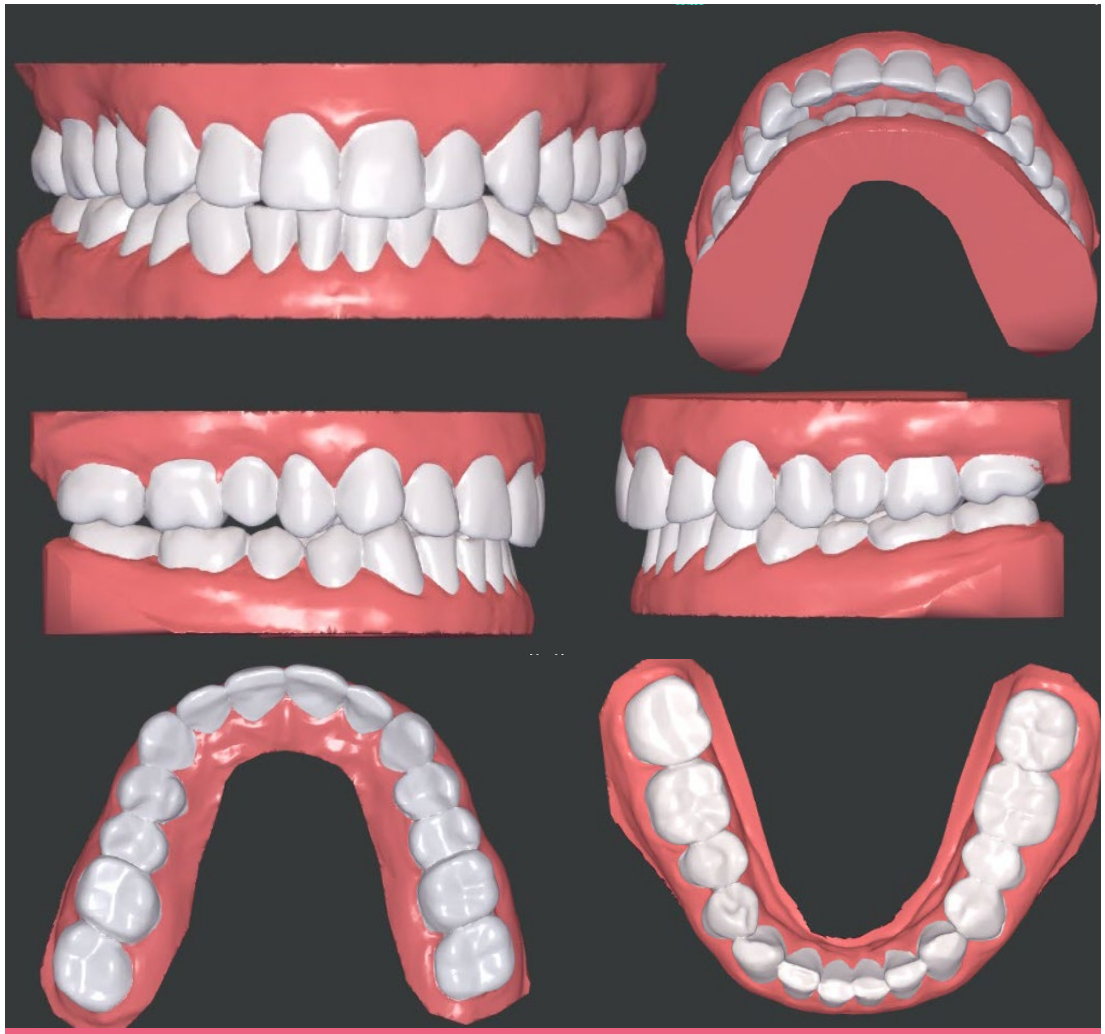


Extraoral x-rays taken before treatment

Images courtesy of Dr. Roberto Shimizu

6.12 Interaction between ClearCorrect Aligners and Prosthesis

After posterior bite lift



First setup

Images courtesy of Dr. Roberto Shimizu

6.12 Interaction between ClearCorrect Aligners and Prosthesis

Progress photos - step 15

Setup - step 15

Images courtesy of Dr. Roberto Shimizu

6.13 Correction of Class I Malocclusion with severe upper incisor crowding

Dr. Roberto Shimizu

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Summary

41 1/2 year-old male presented with a Class I malocclusion, dolichocephaly, 40% overbite, 3mm overjet, 0.5mm upper midline deviation to the right and lower midline coinciding with the midsagittal plane, upper and lower incisor crowding and conoid upper lateral incisors. Patient presented with Bolton's discrepancy with mandibular material excess. Chief complaint: Lower incisor crowding.

Orthodontic Treatment Plan

Mild expansion of upper and lower arches, leveling and alignment with interproximal reduction (IPR) on the lower incisors. As the patient had severe crowding of the lower incisors, it was planned to intrude and procline these teeth. Patient had a mockup created but preferred not to reanatomize teeth 12 and 22, and therefore the upper canines were mesialized to close residual diastemata.

Clinical procedure

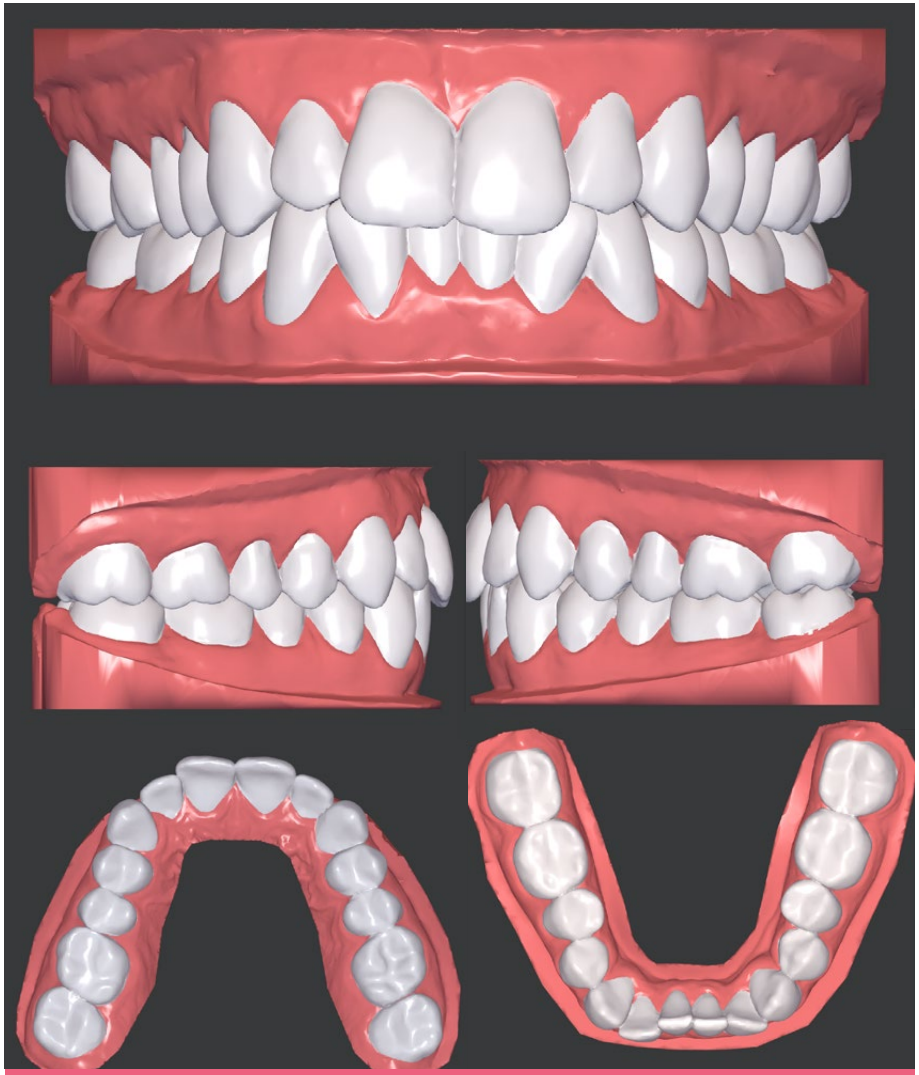
The treatment setup comprised 17 steps, with a 2 week wear schedule, although at step 13 we ordered a revision and treatment was extended to 21 steps. Canine rotation took longer to correct. In spite of severe crowding of the lower incisors, little interproximal reduction was carried out on these teeth, mainly because they were proclined, increasing the dental arch perimeter. The upper incisors were also extruded. The patient preferred to use the conventional 3x3 lower retainer.

Conclusion

The planned treatment outcome was achieved, the patient was extremely cooperative and very satisfied with the results.

6.13 Correction of Class I Malocclusion with severe upper incisor crowding

Before photos

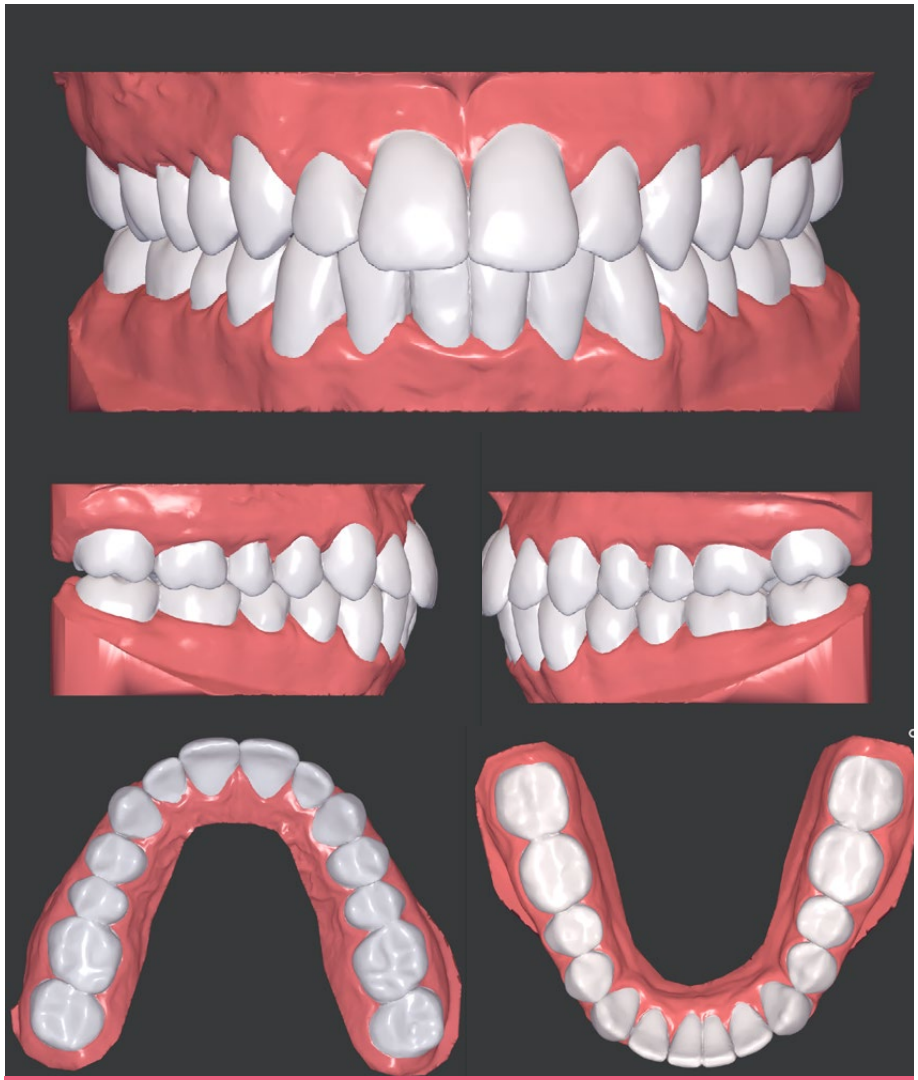


First setup

Images courtesy of Dr. Roberto Shimizu

6.13 Correction of Class I Malocclusion with severe upper incisor crowding

After photos



Final setup

Images courtesy of Dr. Roberto Shimizu

clearcorrect

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It is the sole responsibility of the clinician to evaluate the patient's health and determine if they are a candidate for treatment. The reproduction of these case histories does not guarantee the success of treatment, as it will depend on the performance and skill of the clinician, as well as the patient's condition and collaboration during treatment.

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