

A New Approach to Aligner Orthodontic Treatment



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Dr. Warshawsky is the founder and owner of Get It Straight Orthodontics, a leading-edge orthodontic practice in the Chicago area. A board certified orthodontic specialist since 1992, he has over 25 years of experience with cleft palate and craniofacial cases, and lends his support to all of the craniofacial teams in and around the greater Chicago area. His practice uses state-of-the-art orthodontic treatments to deliver healthy, esthetic results.

Dr. Warshawsky was one of the first orthodontists outside of Europe to begin using the 3M™ Incognito™ Appliance System in 2003. Since then his practice has become one of largest volume users of Incognito Appliances in North and South America. Dr. Warshawsky received his DDS, MS and Certificate of Orthodontics from the University of Illinois at Chicago, and is a member of the World Federation of Orthodontics.

Nearly two decades ago, the addition of clear aligners as a mode of orthodontic treatment invited new thinking in resolving malocclusions. While it was novel at the time, the overall process of treating with aligners has changed little over this period, due in part, to the fact that there was one primary source for aligners that defined the process, capability and limitations of aligners. As a result, there is a tendency to assume that there is no room for new thinking in the area of clear aligners.

Enter 3M™ Clarity™ Aligners. Clarity Aligners represent a digital disruption for the removable orthodontic market. This new approach for therapy is defined by its control and flexibility. The system includes elements that make it able to take on limited versus comprehensive issues, the ability to load a scan into the web-based portal to see your progress, digital retainers available for all cases, and most importantly an open platform where files from any approved scanner are accepted. This new tool, if you will, puts the control back in the doctor's hands for ordering and designing custom orthodontic appliances, data storage, and immediate progress checking, to name a few advantages.

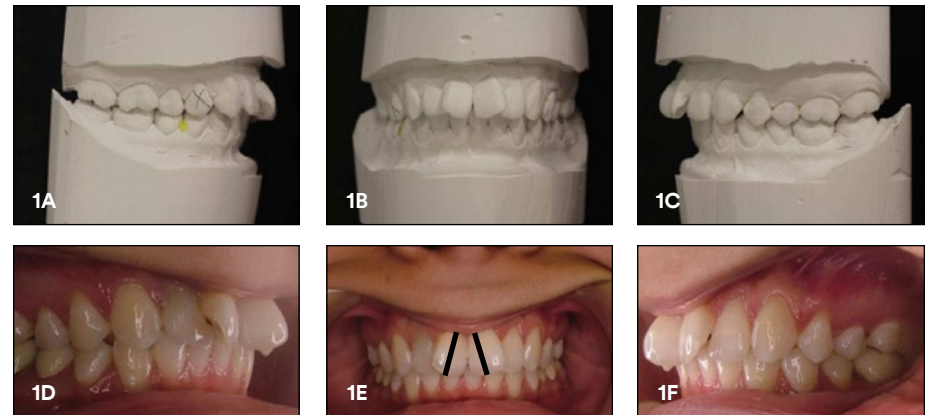


Figure 1A-F

Once again, there is the opportunity for new thinking in regards to treating with aligners. To illustrate this, the following case documents some of the strengths of the system. Case 123 is mild relapse of the anterior teeth. The images in Figure 1 show the original malocclusion that was typified by a 50% overbite and significant rotation of the anterior teeth.

When the original malocclusion presented, it was a Class II Div I Sub right malocclusion. The central incisors were significantly rotated in to the mesial with axial inclination of the central incisors being severely affected. A decision was made to remove the upper right first premolar and set the molar Class II. The case finished over six years ago.

The patient lost touch with the practice but returned almost six years later. She had stopped wearing her retention almost four years previous to that on the upper teeth. Having her original records, it is clear that the teeth have retained somewhat of a memory of their initial position as they are relapsing back to their original position (Figure 2A-B).



Figure 2A-B

Her concern was she did not want to let it get worse, but she also did not want to go back into braces. A decision was made to treat her with the Clarity Aligner system. Although the case was not exceptionally hard, it demonstrated a very strong point about the digital workflow and the artificial intelligence powering the Clarity Aligner system. Aligners in general fit worst on the first day. As a result, it is not abnormal to see that there is a small amount of “lag” when treating a case. The result in this case illuminates the new thinking the system provides in terms of how aligners in different stages can achieve the desired result.

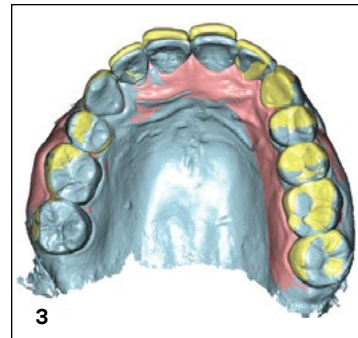
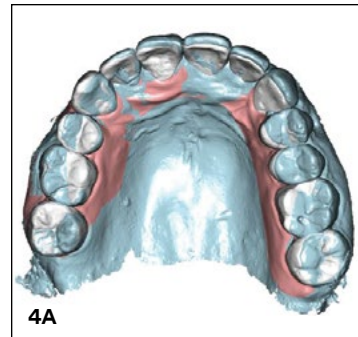


Figure 3

The yellow in Figure 3 represents the original malocclusion and the beginning of the treatment with Clarity Aligners. The blue is the actual scan of the teeth at stage 14. An overlay of the two scans superimposed on the posterior teeth shows the movement achieved.

The images in Figure 4A-B overlay the blue scan at stage 14 to actual predicted position, which is white. The images are close, but not identical. That is to be expected given the lag of the aligners movement.

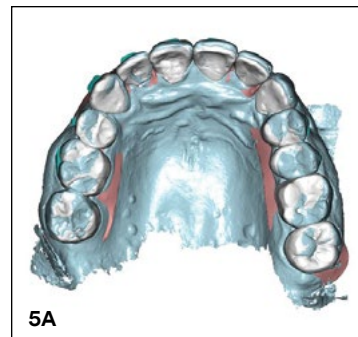


4A



4B

Figure 4A-B



5A



5B

Figure 5A-B

The new thinking that came as a part of this treatment occurred at the end of the case. As part of the treatment plan we delivered a 3M Retainer, part of the Clarity Aligner system, to the patient.

Twelve days after the retainer was delivered, we scanned the patient to see what the teeth looked like (Figure 5A-B).

All three teeth on the patient's left are close, but not fully seated, due to the concept of Aligner Lag. (In Figure 5A-B, they are blue on the anterior view, indicating that they are too far forward compared to the white setup). A second scan was done 26 days after the delivery of the retainer and upon evaluating the position of the teeth it was concluded that the teeth completed their movement as the software predicted (Figure 6A).

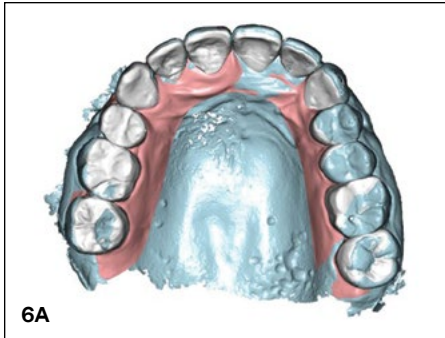


Figure 6A-B

Figure 6A shows the close alignment between the blue scan image and the white setup image after 26 days of retainer wear. A fixed retainer was placed behind the upper teeth (Figure 6B) and the patient is instructed for bedtime that she should utilize her removable retainer for long-term care.

Of interest to note is the fact that you can order as many or as few retainers as you want at any point in treatment. In this case we will scan the final fixed retainer and request our nighttime retention to be based on the scan. I recommend replacing the aligner annually, to maintain what we corrected.

The options within the system allowed for the solutions needed in this result. Designed from the ground up, the Clarity Aligner system provides a new approach to comprehensive custom orthodontic therapy. Designed to work in conjunction with a dental professional, this is a state-of-the-art solution to put choice, flexibility, and control back in the doctor's hands.

Case photos provided by Dr. Neil Warshawsky.

For more information about 3M™ Clarity™ Aligners:

►► [3M.com/ClarityAligners](https://www.3M.com/ClarityAligners)

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