also in this issue

- Case Review: Skeletal Open Bite Treated Without Surgery
  — Drs. Rafael García Espejo and Juana Mª Ruiz Rodríguez

- Lower Cuspid Rotational Control Made Efficient with Accurate Bracket Base Design
  — Dr. Straty Righelli

- Tapping into a Promising Market: Targeting the Adult Whitespace
  — Ms. Debby Hartman
Insignia is an all-inclusive orthodontic solution that combines your treatment goals and smile design with **software and customized appliances**, resulting in efficient, precise smile outcomes often in less time. And now Insignia offers the world’s most expansive menu of treatment options including Insignia Clearguide™ Express Aligners, Damon® Clear™, Damon Q™, Inspire ICE™ and completely customized self-ligating and traditional twin appliances.

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A wide variety of appliance options ranging from aligners to aesthetic and metal appliances meet your clinical needs and increase patient acceptance.

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Customized brackets and easy-to-use placement methods reduce mid-treatment adjustments and deliver precise, predictable finishes in less time.

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Approver software can be used to apply a higher level of finite design into your patient’s treatment and display the virtual end-result.

**No Investment Needed**
No start-up, licensing or inventory costs. Cases are manufactured per patient and shipped in inventory-conscious packaging.

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Dear Colleagues –

Welcome to the latest edition of Clinical Impressions featuring some of the profession’s most advanced orthodontic appliance systems—systems that Ormco has engineered to help differentiate you and your practice.

In his article, Dr. Jeff Kozlowski discusses his extensive clinical evaluation of Insignia™, our comprehensive digital treatment solution that combines 3D diagnostic technology and interactive treatment planning with customized appliances. According to Jeff, Insignia has elevated his standard of care with less effort and more precision than with his previous treatment modality.

It is important to note that Insignia would not be a reality today without the vision and determination of Dr. Craig Andreiko, Ormco Director of Advanced Projects. After three decades of intensive development, Craig has now seen his passion to create the first true straight-wire appliance system come to fruition. Ahead of its time when originally conceived, Insignia now represents a natural evolution in appliance choice.

Also in this issue, Drs. Espejo and Rodriguez present a detailed review of a particularly challenging Class III open bite case that they treated without surgery using Damon® Q™. As if you are in the clinic with them, Rafa and Juana explain their protocols and the rationale behind their impressive treatment plan.

For doctors treating with an active self-ligating appliance, I invite you to review Dr. Straty Righellis’s success with Prodigy SL™, particularly as it relates to lower cuspid rotational control that precludes wire bends and repositioning brackets. As Ms. Debby Hartman explains in her article, leading-edge products that result in fast, comfortable, aesthetic treatment can translate into increased patient starts because of their appeal to what is still a vast untapped market—adult patients.

I would like to thank the esteemed doctors who have contributed their valuable time and clinical expertise to this edition. And to all of our customers and readers of this journal, thank you for your continued support.

Sincerely yours,

Vicente Reynal
President, Ormco Corporation
A true straight-wire appliance would necessitate patient-specific appliances based on an individual’s anatomy. Now, with advances in computer software and digital scanning and fabrication, that idea is a reality and a practical consideration for your practice. Customized Insignia™ is the first true straight-wire appliance. It involves two components: customized appliances—brackets, wires and placement gauges—and 3D real-time virtual treatment planning software. The 3D software enables clinicians to design the patient’s final occlusion on-screen before initiating treatment, then prescribes the fabrication of patient-specific appliances to achieve the planned result. This concept is quite different from how clinicians customarily practice orthodontics. Traditionally, we choose appliances with specific torque values to have certain effects, then react to those effects by repositioning brackets and making wire bends to guide the teeth into the desired positions. With Insignia, we begin with the end in sight and drive directly towards the desired end result.

Over 20 years in development, customized Insignia appliances offer the only comprehensive patient-specific solution available. The treatment planning process begins with accurate PVS impressions. New clinical methods and materials make this procedure quick and easy. From the impressions, the pretreatment malocclusion (T1) is digitized into a precise mathematical model of the patient’s skeletal and dental anatomy and the proposed setup (T2) designed (Figure 1a-b).

See Dr. Craig Andreiko’s discussion. The setup is loaded to the Insignia web portal where, based on clinical experience, functional and esthetic preferences and intimate knowledge of the patient’s anatomy, the clinician can make adjustments and enhance the setup. The Insignia Approver software gives clinicians unprecedented flexibility and control in designing case outcomes.
of the patient’s specific orthodontic needs, the clinician can easily customize it using the Insignia Approver software (Figure 2). The included software offers clinicians unprecedented control in determining accurate tooth position and in their ability to make changes directly to the 3D models without relying on an operator’s interpretation of instructions.

Insignia does not determine treatment mechanics nor prescribe tooth movements and it allows clinicians to use the mechanics and adjuncts of their choice. As doctors modify the desired final outcome in the Approver software, they can view in “real time” how the changes affect the opposing occlusion. Once the clinician finalizes the ideal setup, the Insignia software engineers the customized brackets, wires and precision bonding placement gauges to the exact prescription required to deliver the designed end result accurately and efficiently.

My experience with Insignia is with both the customized passive self-ligating appliance (Insignia custom SL) and Insignia using stock Damon® System appliances. The Insignia software can be used to fabricate patient-specific conventional twin brackets and aligners as well. You can also use Insignia software with stock appliances (Orthos®, Inspire ICE™ and, as I mentioned, Damon). The difference between customized Insignia and Insignia using stock brackets is the third-order customization (torque) that is engineered into the customized brackets. This difference saves considerable treatment time and effort over using a “best fit torque” stock appliance. Having treated with both customized Insignia SL and Insignia using stock Damon brackets, I can attest to the superior value of the customized appliances.

The Clinical Evaluation

My initial experience with customized Insignia SL began in 2007 when I conducted an extensive clinical evaluation by treating 41 patients to completion. The only limitations on the selection criteria were that patients have no missing or impacted teeth, no pending restorative needs, and must not exhibit poor oral hygiene. The criteria were limited in these ways simply because it wouldn’t have been feasible for me to coordinate the ancillary procedures from across the country. At the time, I was in the process of opening my new office in Connecticut and the clinical evaluation was to be conducted at Ormco in California—nearly 3000 miles away. For operator consistency, I played the roles of doctor and assistant, performing the diagnoses, treatment planning, initial bondings and wire changes, providing all mechanics for 100% of treatment. Full records were taken of each patient, including PVS impressions and iCAT® scans (Imaging Sciences, International, Hatfield, PA) for diagnostics and treatment planning using the

3D Construction of the Pre- and Posttreatment Occlusion and Dentition

Craig Andreiko, DDS, MS | Director of Advanced Projects, Ormco Corporation

Customized appliance design is only as good as its underlying foundation. The medullary trough of the mandibular bone at approximately the level of the center of resistance is the most stable foundation for the nonsurgical construction of occlusions and dependable soft-tissue outcomes. PVS impressions provide the information that describes the shape and size of the cortical limits of the mandibular bone. When digitized via high-resolution CT scanning, impressions form a precise model of the patient’s anatomy and serve as the scaffold upon which the patient’s pretreatment occlusion (Figure 3) and, with tooth segmentation and landmarking, the dentition are constructed (T1). Dental models contain between 800,000 and one million digital data points in each arch; individual teeth are composed of more than 40,000 data points each. Such detail creates occlusions of unprecedented precision. Based on the anatomical mapping, clinician preferences and related mathematical calculations, the Insignia software designs the proposed setup (T2). Even though the software identifies the skeletal arch form and designs the proposed final outcome, the clinician can, within anatomical limits, change virtually any aspect of the treatment planning and appliance design.

Figure 3. The digital model of each patient’s lower occlusion shows the shape and size of the cortical limits of the mandibular bone.
Insignia interactive Approver software. Based on my previous experience with Damon System appliances, I estimated that treatment time for the 41 patients would average 17.5 months.

While I wouldn’t recommend selecting this many patients to begin treating with customized Insignia SL for the first time, I am convinced that the best way to learn Insignia is to submit cases regularly. Regular case submission allows the clinician to relate what is designed in the digital environment to the clinical experience and final results. This positive feedback loop of learning will help the clinician design each successive Insignia case with a higher level of understanding and accuracy and hence be more successful with its application. My experience has been that clinicians who regularly submit Insignia cases are more successful with it than those who start only a few cases and wait to see how they work out. My skills improved substantially through the first 10 to 20 cases, and like using any other new appliance, it takes a bit of time to learn the nuances. I also strongly recommend doctors initially select easier cases, and then add more challenging cases when they become familiar with the software and clinical protocols.

In late February, 2008, in a one-chair operatory at Ormco’s Insignia manufacturing facility in Glendora, California, I bonded all 41 patients over a five-day period. This intensive week of bonding proved to be my first insight into the potential efficiencies of Insignia’s direct view/indirect bonding process. After just the first few patients my bonding technique using the placement gauges significantly improved and during the balance of the week, the bonding appointments averaged less than one hour, including preparing the teeth, bonding the brackets, placing bite turbos, engaging the wires, attaching the elastics and reviewing the patient instructions. And all without the help of a clinical assistant!

We all know the importance of placing brackets correctly, but few of us can consistently and quickly place each bracket precisely where it needs to be. With Insignia, you design the final occlusion and the customized appliances will be fabricated with custom torques, custom bases (in-out) and custom wires. You specify your bracket positioning preference (e.g., center of the tooth, more gingival or more incisal) so that the custom appliances are designed to your specifications; thus, it is possible for your Insignia SL appliances to clinically match the placement of your direct-bonded appliances.

To transfer the Approver-designed appliances to the mouth, Insignia provides customized placement gauges that place the brackets in the right spot without need for adjustment (Figure 4). The precision built into the brackets is matched by the accuracy of the placement gauges that offer the benefit of a direct view with the precision of planned indirect bonding.

The major challenge in conducting this clinical evaluation was logistics. Managing treatment from so far away was a daunting experience at first; however, the process reinforced the importance of good clinical decision making and its impact on clinical efficiency. Gone was the luxury of shortening patients’ appointment intervals to accommodate case management alternatives when we need to make clinical decisions based on how a patient responds. It was thus incumbent upon me to create mechanical systems that would withstand the eight- to ten-week appointment cycle of my West Coast trips.

At six months, the first patient finished treatment and by December 2009, after just 21 months, the 41st patient had his appliances removed. To determine the value of customized Insignia SL for my own practice, I initially compared the results of this evaluation with my previous seven years of experience treating patients with direct-bonded Damon System appliances. This comparison helped me evaluate customized Insignia SL with what I used to do in my office—direct bonding. These 41 customized Insignia cases treated in an average time of 12.5 months—a full five months (28%) shorter than my estimate of 17.5 months (Figure 5). I based the estimates on my previous seven years of experience treating patients with direct-bonded Damon System appliances.

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of experience with the Damon System appliance but before I had had any experience with Insignia. In my opinion, this difference alone attests to the efficiency of customized Insignia SL treatment. Another value indicator was the number of repositioned brackets needed to finish the customized Insignia SL cases, which was 50% less than my cases with direct-bonded stock Damon System appliances.

After completing the evaluation, I compared the results with comparable patients I later treated with Insignia using stock Damon appliances. This second comparison assisted me in placing a value on the patient-specific customized torques of the customized Insignia SL appliance. The 41 customized Insignia SL cases in the evaluation finished in 22% shorter treatment time (at 12.5 months) than the next consecutive 41 cases using Insignia with stock Damon brackets that I treated in my private practice (16.1 months). The average number of appointments for the 41 Insignia stock Damon cases was 10.2 versus 8 appointments for the 41 customized Insignia SL cases.

In terms of quality, a subjective evaluation I grant you, I feel that my customized Insignia SL cases finish with quality that equals or exceeds my direct-bonded Damon System cases or my Insignia cases using stock Damon brackets yet in less time and with significantly less effort. I have felt confident enough with the customized Insignia case results to have shown them in presentations around the world and have been so pleased with the results that I now treat 70% of my cases with customized Insignia SL appliances. I still treat 30% of my patients with direct-bonded stock Damon appliances, primarily those who start treatment in late mixed dentition, but for all those cases for which customized Insignia SL applies, it is now my appliance of choice.

This article highlights a few of the patients I treated in the clinical evaluation, demonstrating the quality of the results and efficiency of treatment.

**CASE 1: MARY Y.**


**Treatment Summary**

Improved macro-, mini- and microesthetics, including lower facial height improvement and correction of Class III facial appearance. Treated in 10 months; 6 treatment visits. No repositions. No wire adjustments.

If any patient stands out in demonstrating the benefits of customized Insignia SL combined with effective case management, it’s Mary Y. While I’ve shown the pre- and posttreatment records of Mary’s case in presentations, I’m frequently asked to show and explain the entire course of treatment so I’m taking this opportunity to do so.
Mary presented with a mild Class III malocclusion, reverse overjet of the upper anteriors, a deep bite with a low mandibular plane angle, maxillary crowding and mandibular spacing (Case 1: Pretreatment). The macroesthetic' goals were to improve Mary’s Class III facial appearance by creating positive overjet and increase her lower facial height by extruding posterior teeth and rotating the mandible downward and backward. The treatment plan was to bond all teeth with customized Insignia SL appliances, place bite turbos on the lower incisors to help create positive overjet, and use posterior vertical elastics with a Class III vector to erupt the posterior teeth to the new vertical dimension, thereby increasing her lower facial height.

CASE 1: PRETREATMENT

Bonding: I positioned the customized appliances (both arches) with the customized bonding placement gauges, bonded bite turbos (LL1-2) with Flowtain™ composite, shade A1 (Reliance Orthodontic Products, Itasca, IL) and a Mini-Mold kit (Ortho Arch, Schaumburg, IL) and engaged customized .014 Cu Ni-Ti wires 6-6. The bite turbos were polished to a CL III ramp design to assist maxillary anterior teeth in developing ideal axial inclination towards positive overjet. With posterior occlusion now open approximately 4 mm, I started early, light elastics (Parrot 5/16”, 2 oz.) to extrude posterior teeth in a Class I direction.

CASE 1: BONDING

7 Weeks/1st Visit: In my practice, first return visits after bonding are scheduled at 10 weeks, but managing cases from 3000 miles away dictated they be at 7 weeks. At Mary’s first return visit, the effects of well-planned mechanical systems were already evident. Her posterior teeth were in Class I occlusion and the overjet had corrected from -2 mm to +1 mm. I placed custom .018 Cu Ni-Ti wires back to the 7s and switched the Class III elastics to an anterior box configuration (U/L 2-2, Parrot) to assist in creating positive overbite and to enhance her smile arc.

' The expressions “macroesthetic (facial), miniesthetic (smile), and microesthetic (teeth)” are terms that Dr. David Sarver (Vestavia Hills, AL) coined to provide common nomenclature for diagnostic analysis.
17 Weeks/3rd Visit: I engaged custom .014 x .025 Cu Ni-Ti archwires, initiated anterior space closure with power chain (U/L 3-3) and engaged steel tie-backs U 6-3, bilaterally. For the next 10 weeks, she engaged CL III “V” elastics 12 hours daily to ensure that the posterior occlusion remained locked in Class I.

27 Weeks/4th Visit: I engaged custom .018 x .025 Cu Ni-Ti archwires. While all the mandibular dental spacing had closed, some maxillary dental spacing remained. Close inspection of my original setup using the clipping function in the Approver software yielded the reason.
Because of heavy contacts between the prominent lingual marginal ridges of Mary’s upper incisors and the incisal edges of her lower incisors (Figures 6a-b), her upper incisors remained anterior to the planned setup position. Clinical evaluation led me to address the issue with a few simple measures: first, gentle equilibration of the prominent lingual marginal ridges on her upper incisors. Second, due to the shape of her lower incisors and the presence of small black triangles, I performed mild lower IPR for both functional and esthetic improvement and replaced the power chain under the wire (L3-3) to assist anterior space closure.

There are two important messages here. 1) Ensuring the accuracy of the digital case setup as it relates to treatment progress is vital. You will see clinically what you approve in the software so employing a few key protocols each time you review a case will ensure that your cases will treat out as planned. 2) While Insignia provides digitally-assisted treatment planning and customized appliances, clinicians never relinquish their ability to manage cases as they progress. I say this because I’ve heard doctors voice the concern that once they’ve approved a setup, they don’t feel that they will be able to make adjustments to the original plan and that their years of skill development would seldom be required. While it is true that computer-aided 3D treatment planning is inordinately valuable and is certainly how most of us will be treating patients in the future, there are always clinical mechanics, occlusal function and biology in the human masticatory system at play. Sometimes unforeseen mechanical issues arise during the course of treatment on which clinical decisions need to be made. All of these decisions require university-level orthodontic training and our years of professional experience and clinicians are always in control of their cases.

34 Weeks/5th Visit: I engaged the customized .019 x .025 TMA archwires with crimped posts. Since all anterior space was closed, I “figure-8” lace-tied steel ligatures (U/L 6-6) under the wires and placed tiebacks to close small spaces between the 6s and 7s. Some minor anterior incisal manicuring enhanced the microesthetic goals and transitioning to bilateral posterior triangle elastics (Bear ¼”, 4.5 oz.) ensured proper seating of the posterior occlusion prior to treatment completion.

10 Months/6th Visit: I debonded Mary’s appliances, placed fixed lingual retainers and took impressions for fabricating clear retainers to ensure stability posttreatment (Case 1: Final Records). The accuracy of customized Insignia SL’s computer-designed appliances and wires combined with the precision bonding process helped provide this result, which required no repositioned brackets and no wire adjustments. Thorough evaluation of her post-treatment records shows a marked improvement in her macroesthetic facial aspects. The serial cephalometric tracing from Mary’s iCat scans (Case 1: Cephalometric Tracings) shows that her lower facial height increased due to the planned supereruption of the maxillary posterior teeth and downward and backward rotation of the mandible. Miniesthetic changes include improvement of her anterior dental esthetics and smile arc. Microesthetic improvements resulted from careful and appropriate tooth reshaping that put the finishing touches on what I consider to be an excellent case result. Equally important to my view of the success of treatment is the fact that Mary loves her new smile.
CASE 1: 10 MONTHS/6TH VISIT - FINAL RECORDS AND INITIAL INSIGNIA SETUP

CASE 1: CEPHALOMETRIC TRACINGS

INITIAL

FINAL

OVERLAY
The Effect of Custom Torque Values: Improved Efficiency

Given the facial contours of the porcelain crowns on Mary’s lower first molars and my design of Mary’s T2 occlusion, the Insignia software calculated nearly zero-degree torque molar brackets to manage her final posterior occlusion accurately (Figure 7). Other than in my residency, I can’t remember the last time I chose zero-degree torque brackets to treat lower molars. Using standard-torque stock Damon® Q™ (DQ) brackets (even with Insignia treatment planning) would have taken considerable effort to finish her treatment effectively, especially given the substantial difference between the DQ first molar stock bracket torque (-28°) and the customized torques Insignia prescribed for Mary’s first molars. Patient-specific torque values are an excellent example of how customized Insignia SL appliances improve the efficiency and effectiveness of treatment. With stock brackets, there are only two or three torque options for the anteriors and usually only one posterior torque option. Insignia offers an almost infinite number of customized torque options. By treating with customized torque values, we can achieve high-quality results in shorter than average treatment times, with greater predictability, less effort and fewer wire adjustments.

### Custom Torque Values for Molars: Case 1

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<th>LR6</th>
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<td>-0.2°</td>
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<td>-0.8°</td>
</tr>
<tr>
<td>Stock DQ Torque</td>
<td>-10°</td>
<td>-28°</td>
<td>-28°</td>
<td>-10°</td>
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</tbody>
</table>

*Figure 7. Note the marked differences between the Case 1 customized Insignia posterior torques and the standard torque for the stock DQ bracket prescription.*
CASE 2: SUNNY S.
Determining Accurate Bracket/Tooth Tip.

Treatment Summary
Full correction of bilateral posterior crossbite.
Treated in 12 months/1 week; 8 treatment visits.
No repositions. One wire adjustment.

Sunny presented for treatment with a Class I occlusion and Class III tendency, the primary clinical finding being a bilateral posterior crossbite (Case 2: Pretreatment). The treatment plan was to bond customized Insignia SL fixed appliances, using Optiband™ flat-plane bite turbos (Ormco) on his lower molars and bilateral crossbite elastics to address the crossbite. Treatment completed with full correction of his bilateral posterior crossbite (Case 2: Final Records). Although his treatment required no bracket repositioning, I did make one adjustment in the wire to tip his upper right central incisor. Note the distal root of the UR1 from the interim Panorex taken at 6 months (Figure 8). At first it appeared that the customized Insignia placement gauges had not yielded an accurately bonded bracket to the upper right central incisor, but after reviewing my Approver case setup, it became apparent that I had built incorrect tip into the original appliance (Figure 9a). Had I been more cognizant of the slight crown to incisal edge angle, I would have chosen to place a bit more mesial root tip in the upper right central incisor (Figure 9c-d). With this correction in the original setup, it’s possible that Sunny’s treatment would have finished as Mary’s had with no repositioned brackets and no wire adjustments.
The challenge with any digital orthodontic treatment planning process is the initial disconnect between what we “visualize” on the computer and what we expect to see in the mouth. Insignia offers clinicians an important means of increasing their understanding about how the clinical decisions they make during the course of treatment affect tooth movement and occlusion because they can see the results in the simulated virtual environment before acting on those decisions. This feedback loop leads to better clinical decisions which lead to more effective treatment. Because I’ve frequently used Insignia to do such analysis, I believe that I have become a better orthodontist overall, even when not using Insignia.
CASE 3. MELISSA H.
Capitalizing on the Smile Arc™ Function.

Treatment Summary
Crowding and full CL II correction with early light elastics. Treated in 11 months; 7 treatment visits. No repositions. Wire adjustment at one appointment.

Melissa presented with a Class II malocclusion and significant crowding (Case 3: Pretreatment). The treatment plan called for full fixed customized Insignia SL appliances, bite turbos and early, light Class II elastics. With her crowding unraveled after just 6 months of treatment, Melissa’s malocclusion over corrected to a mild Class III. This phenomenon clearly demonstrates the power of early, light elastics when used in conjunction with disarticulation and Damon System mechanics with customized Insignia SL brackets. By switching to light Class III elastics (nighttime only), she was solidly occluding in Class I position by the next visit and was ready for finishing.

The Insignia smile arc function allows clinicians to design the curve of the upper anteriors to match the patient’s lower lip contour with a click of the mouse. As Melissa’s treatment progressed, I felt that her smile arc needed to be slightly deeper than I had planned. Repositioning the upper anterior brackets would have been the preferred solution but the logistics of providing treatment from 3000 miles away made a wire adjustment the favored protocol in this situation. You can see from her final records the pleasing result (Case 3: Final Records). After Melissa completed treatment, I analyzed her setup in the Approver software to determine how I might have planned her smile arc to create the most pleasing end result. Figure 10a represents Melissa’s original setup. Had I set up her case with the smile arc shown in Figure 10b, no wire adjustment would have been necessary.
Conclusion
Here are the primary things I have come to value over the past three years of working with customized Insignia SL:

1. Computer-assisted diagnostics and treatment planning allows me to “begin with the end in SIGHT” and finish my cases with the same high quality as stock Damon brackets, but faster and more easily. The fact that I estimated 17.5 months for the patients in the clinical evaluation and treated them in an average of 12.5 months was enough evidence for me to begin treating most of my patients with customized Insignia SL.

2. Insignia provides me with enhanced clinical efficiency. From the initial bonding appointment to the completion of treatment, having the custom appliances specifically engineered to reflect the patient’s anatomy drives tooth movement directly to the desired final occlusion, which means fewer adjustments along the way. This efficiency is based on a combination of: (1) creating an ideal final occlusion in the Approver software; (2) quickly and accurately placing the brackets the first time with the precision placement gauges; (3) managing progressive treatment using the five custom-designed Insignia archwires; and (4) improved torque delivery from the customized torques designed into each bracket.

3. Customized Insignia SL has helped me reduce treatment time by more than 20% (versus Insignia using stock Damon appliances) and bracket repositioning by 50%.

4. Computerized orthodontics does not take the orthodontist out of the treatment process. Just as today’s most technologically advanced fighter jets require an experienced pilot to manage its systems, the orthodontist must still provide clinical oversight to manage each case effectively. What I’ve realized is that Insignia combined with my clinical expertise yields better results than either of us can provide alone.
Summary
In starting the customized Insignia SL clinical evaluation, I drew upon my substantial clinical experience with Damon System techniques and mechanics to estimate the average treatment time of 17.5 months for the 41 selected patients. Other than that, I had little idea about what to expect in terms of the quality of the treatment outcomes or the clinical treatment efficiency I would experience. In the end, I was “blown away” by the results I was able to achieve by combining my clinical expertise with Insignia Advanced Smile Design™ Approver software and fully customized appliances. The average treatment time for these 41 patients was a mere 12.5 months—nearly 30% shorter than my initial estimate. Along with the substantial decrease in treatment time came a corresponding reduction in the number of clinical visits and the results were achieved through much less overall effort.

However, the most important thing I learned from this evaluation is that Insignia’s patient-specific appliances gave me the vehicle to achieve results that are better than I have ever produced for 41 consecutively treated patients at any time in my orthodontic career. In my opinion, the contribution that this appliance system makes in elevating my standard of care speaks volumes in support of the benefits of customized Insignia SL for the practicing orthodontist.

Case 3: Cephalometric Tracings

*Orbit Oral/Maxillofacial Imaging and Diagnostic Services, Newport Beach, CA*
Looking to drive more patients to your practice?
Over 50 million consumers have been exposed to the Damon® System through Fox News, Woman’s World, SHAPE, Pandora, HuffPost Teen and endorsement by “Soul Surfer” Bethany Hamilton.

What does this mean to a Damon System practice?
More patients to your practice via the Damon Doctor Locator on Ormco’s consumer website, damonbraces.com. Just look at the growth improvements over the last two years.

• 190% increase in traffic to DamonBraces.com
• 360% increase in Damon Doctor Locator searches

Ask Ormco how you can benefit from the Damon Doctor Locator and a wide range of customizable, turnkey practice marketing support materials.

The Damon System — proven clinical performance and now proven marketing performance.
CASE REVIEW:
Class III Skeletal Open Bite Treated Without Surgery

Dr. Rafael García Espejo • Dr. Juana Mª Ruiz Rodríguez

Editor’s Note: For the case, Drs. Espejo and Rodríguez employed passive self ligation (PSL) and high-tech archwires that they attribute to fostering the physiological transverse arch development critical to open bite treatment with elastics taking a secondary role. In their hands, this armamentaria generates extra space in the palatal vault, which allows the tongue to reposition itself away from the interocclusal space and fosters dentoalveolar remodeling that are central to bite closing. Important to the result—achieved in only 12 months—was precise bracket placement and the use of low-friction (purple) TMA that fine-tuned the intercuspalation.

Dr. Rafael García Espejo, Córdoba, Spain

Dr. García Espejo holds a MS in Orthodontics and Dentofacial Orthopedics and a Medical Specialty in Stomatology from the University of Seville. He also holds a Ph.D. in Medicine and Surgery from the University of Córdoba where he served as professor from 1985-2010. He is a visiting professor at seven universities and an Academician Member of the Pierre Fauchard Academy. He has published several scientific articles and has spoken internationally in more than 20 countries, including all of the European Damon Symposiums and many International Damon Forums. He is co-director with Dr. Ramon Perera of the European Damon Master program that is offered for clinicians specializing in the Damon technique. Rafael and his wife Ester have two children, Rafael and Ester, who are both in dental school and planning to become orthodontists.

Dr. Juana Mª Ruiz Rodríguez, Córdoba, Spain

Dr. Ruiz Rodríguez received her degree in dentistry from the University of Granada in 2003 where she obtained the Premio Extraordinario Fin de Carrera and the Tercer Premio Nacional Fin de Carrera de Educación Universitaria, national honors awarded to the most outstanding graduates. She continued her training in orthodontics with a three-year apprenticeship under the tutelage of Dr. Espejo and has continued working in his private practice in Córdoba since then. Having employed the Damon technique since 2003, she completed the Damon Master program in 2007 and has participated in several national Damon congresses. Juana obtained her Ph. D. in Stomatology from the University of Granada in 2012 and is an active member of the Spanish Society of Orthodontics.

Pretreatment Diagnosis

A 16-year-old male with a skeletal open bite, slight Class III molar and cuspid relationships, a low tongue posture, unfavorable swallowing habit and tongue thrust with rhizolysis affecting the root apices of the upper incisors (which was presumably a result of the prior conventional orthodontic treatment).
Facial/Soft Tissue/Macroesthetics
Dolichofacial with a flat mid-face. Full lower lip, recessive upper lip and a slightly obtuse nasolabial angle. Symmetry between the nose and the chin.

Smile/Miniesthetics
Anterior open bite with 50% upper incisal display. No gingival display on smiling. Transverse arch relatively well developed but with only the first premolars partially showing on smiling. Upper incisors slightly protrusive. Noticeable tongue thrust.

Teeth/Microesthetics
Microdontic lateral incisors. Gingival heights/contours symmetrical except for a slight lengthening at the lower cuspids. Healthy gums except for a slight tendency for recession in the lower anteriors.

Treatment Objectives and Plan
Employ Damon® Q™ (DQ) and elastics beginning mid-treatment to achieve functional occlusion and enhanced smile and facial esthetics. Close the open bite and achieve proper upper incisor inclination. Provide more volume to the mid-face. Balance the upper lip with the lower lip. The wire sequence for both arches progressed as follows: .014 Copper Ni-Ti® for 10 weeks; .014 x .025 Cu Ni-Ti for 10 weeks; .018 x .025 Cu Ni-Ti for 16 weeks; .017 x .025 TMA (purple) for 16 weeks. Bracket torques: U 3-3: Standard; L 3-3 Low. See the Case Discussion for an explanation of the torques used in this case.

Treatment Progress
BONDING
Indirect-bonded 5-5 and banded 6s and 7s. Engaged .014 Damon® Optimal Force Copper Ni-Ti® archwires, but only to the 6s.
5 MONTHS/2ND VISIT:
By 5 months, the .014 and .014 x .025 Cu Ni-Ti archwires had been employed for 10 weeks each, then .018 x .025 Cu Ni-Ti archwires and crossbite triangular (right side) and box CL III tendency (left side) light elastics were engaged.

7 MONTHS/3RD VISIT — Rebonding Appointment
Took an interim panograph and repositioned several brackets, maintaining the archwires and elastics, but in a standard triangle configuration, bilaterally.

Interim Pano
Note: There is no evolution in the initial rhizolysis
10 MONTHS/5TH VISIT
The .017 x .025 low-friction (purple) TMA archwires had been engaged for 5 weeks with a change in the elastics configuration at 9 months (CL III tendency on the right side), then back to a triangle configuration, bilaterally at this juncture.

11 MONTHS/6TH VISIT — Rotation Wedges Employed
The TMA archwires had been engaged for 9 weeks at this juncture and the elastics were placed in a double finishing configuration. The reduced widths of DQ brackets—while increasing the interbracket distances that further reduce the already light forces that PSL applies—also reduce rotational control in the upper incisors. This reduced control can sometimes warrant using rotation wedges (for small rotations) or placing finishing wire bends (for more severe rotations).
12 MONTHS — Treatment Complete. 6 Treatment Appointments.
The case was treated to a functional occlusion with the correction of the open bite and the molar and cuspid relationships while achieving excellent anterior and buccal segment crown inclination and posterior intercuspation. The arch widened so that the premolars show on smiling and there is greater incisor display. There is also greater volume in the mid face for pleasing symmetry. Maintained excellent tissue health and the final X-rays demonstrate that the rhizolysis was not exacerbated by treatment.

Note: There is no evolution in the initial rhizolysis

Retention: Damon Retention Splint (AOA) and lingual bars U2-2; L 3-3.
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Case Discussion

In open bite cases such as this one, we can usually transition from the last Cu Ni-Ti wires to TMA for finishing without first using stainless steel archwires if the position of the teeth and their inclinations, the transverse, gross A/P and open bite issues have all been resolved. If so, the TMA wires can be directed toward the fine A/P corrections and perfecting the final intercuspation. In finishing open bite cases, we specifically use .017 x .025 cross-section wires because this wire dimension allows sufficient play in the bracket slot. Note: Engaging the second molars until final debonding fosters full control of the arch form.

Normally, we use standard low-friction TMA wires to finish cases, but in cases such as this one, where we placed finishing elastics with an A/P correction component, we prefer to employ purple TMA wires, which have a coefficient of friction close to that of stainless steel in order to facilitate sliding and make the small (A/P) corrections possible.

With passive self-ligation, the mechanism that actually closes the bite is not the elastics (although they no doubt facilitate bite closure), but the capability of the appliance to obtain transverse development of the arch form. When first working with this PSL appliance to treat open bites, we began to realize that after having engaged the .018 x .025 Cu Ni-Ti wires for a sufficient period of time, the bite closed down without the use of a single elastic. At first, we were astonished by this phenomenon but unable to explain it. We now believe that it is due to the physiological transverse arch development that the final high-tech archwires in the PSL brackets produce. The extra room this arch development generates in the palatal vault allows the tongue to reposition itself away from the interocclusal space and fosters dentoalveolar remodeling that we attribute to being primarily responsible for the bite closing. Regardless of the incredible occlusal and esthetic results obtained, however, we see through superimpositions that the cephalometric values remain as severe as initially presented.

We do not mean to imply that elastics do not facilitate bite closing, but their use for this purpose must be considered secondary to and coordinated with the principal bite closing mechanism of physiological arch form development. We recommend limiting the full-time use of anterior elastics to early elastics using only very light forces (no more than 2 oz.). Reducing their

Regardless of the incredible occlusal and esthetic results obtained, the cephalometric tracings demonstrate that the cephalometric values remain as severe as initially presented, all of which demonstrates the enormous capacity for dentoalveolar compensation that the Damon System engenders once the tongue leaves the interocclusal space and repositions itself in the physiologically developed palatal vault.
time to nighttime only when transitioning to heavier forces limits the risk of producing anterior teeth root resorption or a gummy smile.

We would like to point out that even though there was root resorption initially present in the patient’s upper four incisors (probably a consequence of the previous orthodontic treatment with traditional high-force mechanics), we completed the case without worsening it, a direct consequence of working with PSL and light forces during all phases of treatment, and, as we already mentioned, without abusing the use of potentially damaging anterior elastics.

We tend towards the use of low-torque brackets for most open bite cases (both arches) since only the reduction of incisor crown proclination will foster their closing. Since there was no crowding in the lower arch of this case, we selected low torque for all of the lower arch anteriors, including the canines. Because there was a Bolton discrepancy in the upper arch (with the very small laterals), we decided to use standard torque brackets there, which allowed us to compensate for these reduced-size teeth with a little extra torque, thus better coordinating the arches.

“Although not pertinent to this case, when treating an open bite case with a significant cross bite or upper arch crowding, it is important to select the negative torque values available with SnapLink™ molar tubes for the upper molars (-18° for 1st molars and -28° for 2nd molars), which afford better control of the curve of Wilson during transverse arch form development (the main mechanism in bite closing).”

— Dr. Rafael García Espejo | Córdoba, Spain

1 The diagnostic terms Macro-, Mini- and Microesthetic are used courtesy of Dr. David Sarver, Westavia, AL, which are outlined in his article, “Soft-tissue based diagnostics and treatment planning,” Clinical Impressions, Vol. 14, No. 1, 2006: 21-28.

2 All Copper Ni-Ti archwires used in this case were Damon® Optimal Force Copper Ni-Ti®.
Introducing AdvanSync 2 Class II Molar-to-Molar, the next generation in Herbst* therapy. Featuring all-new technological advancements that dramatically improve clinical performance and reliability, AdvanSync 2 helps you achieve both dental and skeletal corrections simultaneously, advancing the mandible to a Class I occlusion in as little as six months.

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*Herbst is a registered trademark of Dentaurum Inc.
Orthodontic appliance manufacturers carefully build torque, tip and rotational control into their bracket prescriptions. If, however, the bracket pad is not contoured to provide an anatomical fit to the labial surface of the tooth, the tooth will not move to the desired position. Bending archwires to compensate for inaccurate bracket pad design wastes valuable chairtime. Making offsetting bends to counteract loss of control can often create additional undesirable tooth movements that extend treatment.

Below are three questions I was continually asking myself before transitioning to Ormco’s active Prodigy SL™ appliance and which might help you focus on an important clinical issue — cuspid rotational control.

1: *Does your current self-ligating bracket overrotate lower cuspids mesially?*

2: *Do you feel you have to reposition brackets mesially too often to compensate for lower cuspid rotations?*

3: *Do you have to place step-in/step-out bends too often to resolve lower cuspid rotations?*

If you answered “yes” to any of these questions, you’re certainly not alone. Until recently, I had experienced the same frustrations and have heard the same complaints from doctors who attend the seminars I conduct (Figure 1).

My experience with the newly developed Prodigy SL appliance, which I have been employing for 18 months since the bracket was in its prototype form, demonstrates that the design of this appliance resolves pretreatment rotations and precludes rotational issues from occurring. When comparing the mandibular cuspid fit of the Prodigy SL appliance with the fit of the...
Cases 1 and 2 are more examples of the types of rotations I was experiencing with my former active self-ligating appliance. As soon as the prototype of Prodigy SL became available, I rebonded these two cases and many others. Soon after rebonding these cases, all the rotations resolved.

Moreover, most active self-ligating appliances on the market other than Prodigy SL utilize a flexible cobalt-chromium clip that serves as the opening and closing mechanism. I have often experienced considerable fatigue with this clip. The design of the Prodigy SL slide and its exacting fabrication with robust, superelastic Copper Nickel Titanium™ gives it significant resilience to deliver constant forces without deforming. I have experienced no slide fatigue with Prodigy SL and no loss of rotational control.

**Two Case Examples:**
**Rotations from Another Active SL Bracket Resolved with Prodigy SL**

Cases 1 and 2 are more examples of the types of rotations I was experiencing with my former active self-ligating appliance. As soon as the prototype of Prodigy SL became available, I rebonded these two cases and many others. Soon after rebonding these cases, all the rotations resolved.

In **Case 1**, following 12 months of treatment with the competitive bracket, the lower left lateral was still mesially rotated. Six weeks after rebonding with Prodigy SL, the rotation had totally resolved.
Case 2 demonstrates a similar situation. After 14 months of treatment with the competitive bracket, the lower right lateral and canine were still mesially rotated. In only three weeks after rebonding the case with Prodigy SL, the rotation had resolved and four months later, optimal alignment was achieved.
CASE 3:
Incisor and Cuspid Control of Prodigy SL

Case 3 demonstrates the incisor and cuspid control I consistently see with my Prodigy SL cases. At bonding, a .014 Copper Ni-Ti wire was engaged to begin the leveling and aligning phase. Approximately six weeks later, with a .020 Cu Ni-Ti wire engaged, the right cuspid is being incorporated into the arch and the incisor positions are being held. Four months later (5.5 months in treatment), with a .019 x .025 Cu Ni-Ti wire engaged, the pretreatment rotations have resolved and the positions of the incisors demonstrate that the case is optimally aligned.

Conclusion

Prodigy SL is now my active appliance of choice, not only because of the rotational control but for its many other features. There’s a vertical slot for greater versatility in treating high cuspids and blocked out laterals, optional bondable hooks, and a patented laser-etched pad with a rim to lock in the adhesive as well as differential etching by tooth. An important benefit is that lower brackets open to the gingival so there’s no wasted time closing slides to see the entirety of the occlusion.

Changing appliances is an important decision for an orthodontist that no one considers lightly, but if you’re frustrated with your current active SL option or considering changing from your conventional appliance to self-ligation, I recommend you consider Prodigy SL. You’ll be able to maintain your current treatment mechanics while gaining all the benefits of self ligation—which are considerable.
The patented design of Prodigy SL provides you with maximum rotational control, proven bond reliability and consistent clinical performance. Plus, Prodigy SL's robust SpinTek™ slide is constructed of Copper Ni-Ti® for less wear and delivery of continuous force. That means more predictable results.

"The new slide mechanism works much better than any other active system I have used. Due to the Copper Ni-Ti slide I have also found that there is more control and teeth seem to line up quicker."

~ Dr. Doug Knight

**Maximum Control**

Copper Ni-Ti slide and patented bridge design deliver more consistent clinical performance than Voudouris clip designs for greater rotational control and torque expression.

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Anatomically contoured pad for a better fit including tooth-shaped pad for cuspids.

**Easy to Open**

SpinTek™ slide design employs reciprocal forces during opening – for a net force of 0 kg even with calculus build-up.

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* Internal testing data on file
Recent AAO statistics reported by *The New York Times* show that from 1994 to 2010, the number of Americans 18 years and older getting braces—or some type of teeth-straightening treatment—from an orthodontist has jumped 58 percent, from 680,000 annually to 1.1 million. Furthermore, those same statistics show that adults undergoing treatment account for 22 percent of all orthodontic cases—that’s more than one in every five patients.

Another study commissioned by the AAO reports that one-third of American adults are unhappy with their smile. Out of those adults, 36 percent believe they would have a better social life if they had better teeth. This sentiment is especially true among young adults, as 48 percent of Americans ages 18-24 have untagged a picture on Facebook because they didn’t like their smile.

With such vast potential to treat the adult whitespace, orthodontists can increase their practice revenue by better understanding this untapped market and effectively promoting the latest treatment methods proven to deliver exceptional patient results. To help, I invite you to explore the following tips that offer insight into the growing audience of adult orthodontic candidates.

**Start with Mom**

Most doctors know the importance of targeting mothers—typically the key household decision maker. It is widely reported that women make or influence the majority of all purchasing decisions. But did you know that according to consultancy firm Girl Power Marketing an astounding 80 percent of healthcare decisions are made by women? Furthermore, *thenextweb.com* states that 64 percent of moms ask other moms for advice before purchasing a new product. Therefore, doctors who market adult treatment options to moms will have the best chance to treat parents and their children. Education is the best way to kick off your targeted adult marketing efforts.

Last year, the **American Association of Orthodontists (AAO)** kicked off its first-ever national advertising campaign targeting adults. Why? According to Dr. Michael B. Rogers, president of AAO, there are many adults on the fence when it comes to receiving orthodontic treatment, making it increasingly important for the AAO to educate the adult audience on the benefits of braces.
Educate Adults

While many parents seek orthodontic treatment for their children, the majority of them may not realize the benefits of straight teeth for themselves. In fact, there are approximately 23 million U.S. adults who are interested in improving their smiles, but don’t seek treatment due to lack of education, according to a study from the Millennium Research Group. The same study indicates that adults are more likely to seek treatment after reviewing educational materials that showcase the benefits of orthodontic treatment, as well as advancements in the treatment experience itself.

With this in mind, it’s important to ensure that your practice website, lobby and consultation rooms resonate with the adult audience by featuring photographs of adults in treatment and adult patient before-and-after photographs. Patient education brochures and consultation aids featuring adult patients are also effective and available via Ormco’s online practice marketing library. Doctors may contact their Ormco sales representative to access this online resource library of patient imagery, consultation tools, practice videos, webpage assets and more for doctors offering the Damon® System, Insignia™, Inspire ICE™ and Prodigy SL™.

In addition to implementing marketing materials that target adults throughout your office and practice website, it’s important to provide potential adult patients with information on treatment that addresses their key concerns. This includes advanced solutions that are aesthetically pleasing, comfortable and fast.

Showcase Advanced Technology

Many adults are open to advanced treatment solutions that will create the best possible smile, despite marginal price increases. In fact, an Ormco study conducted by Boston Consulting Group indicates that patients would pay a premium for treatment that is faster, more aesthetic and more comfortable.

Another Ormco study conducted by the Millennium Research Group found that potential adult patients are only moderately price sensitive in selecting a treatment option, citing very little difference in preference for a treatment priced at $250 versus $300 per month. The bottom line? Adult patients are willing to evaluate treatment options based primarily on outcome and total treatment time—leading them to consider advanced treatment options even despite marginal increases in price.

Ormco’s Insignia™ Advanced Smile Design™ is an all-inclusive digital solution that can also help to differentiate your practice. Insignia combines 3D smile design software with customized appliances to help orthodontists deliver efficient, precise outcomes—often in less time and with fewer office visits. This is a huge advantage not only for busy moms-on-the-go, but also image-conscious adults who love customization—from beauty products and makeup to tailored clothing. When speaking with prospective patients, be sure to communicate how Insignia allows you to add a level of precise detail and customization that provides the best long-term occlusion and smile in less time.

Insignia also serves as a powerful consultation tool, allowing doctors to present prospective patients with a 3D video morph of their final smile before starting treatment. Now patients can be confident

To learn about the benefits of Insignia from a patients’ perspective, visit www.insigniasmile.com – Ormco’s consumer education website with an Insignia Doctor Locator.

Damon Clear patients

Pretreatment

Posttreatment

Treatment Time - 10.5 months, 7 appointments*

* Insignia case treated by Dr. Jeff Kozlowski
they’re making the right decision to undergo treatment before bonding day.

**Aesthetics Matter**

Patient demand for aesthetic treatment continues to grow. If you haven’t considered expanding service offerings to include virtually invisible bracket solutions, now is the time. For image-conscious adults, Damon® Clear™ provides a discrete treatment experience with results that go beyond straight teeth — providing wider smiles with smoother cheek contours, better facial symmetry and improved profiles. When guiding adult prospects through Damon Clear features, doctors and treatment coordinators should stress how the brackets resist staining, are easy to keep clean and offer exceptional comfort without tightening. What’s more, Damon Clear is a treatment option with Insignia, providing patients with a customized, efficient and discrete treatment experience.

For patients who require minor anterior tooth movements, consider showcasing the benefits of Insignia™ Clearguide™ Express virtually invisible aligners that won’t discolor over the wear period. Clearguide Express combines Ormco’s Insignia Advanced Smile Design™ software with AOA Lab’s custom aligner expertise. This aligner is an affordable option for patients of all ages — especially adults — who are looking for an alternative to braces to quickly transform their smiles and boost confidence.

**What’s the best way to showcase aesthetic options to adults?** In addition to including adult patient photographs on your practice website, office walls and education materials, your patients in treatment are even more convincing. Consider treating your office staff members and referring dental hygienists with your clear braces and/or aligners to proudly show-off their discrete treatment to visiting parents in your office. The saying goes, “A picture is worth a thousand words.” That may be true, but a happy, smiling patient and corresponding referral is worth at least $5,000 in practice revenue.

**Use the Power of Social Media**

Now that we’ve addressed the importance of showcasing leading orthodontic technology to potential adult patients, let’s talk marketing. Relying solely on a practice website may no longer be enough to ensure a steady flow of new patients. With 62 percent of adults worldwide using social media, according to thesocialskinny.com, one of the best ways to reach and educate them is through channels such as Facebook, Twitter, YouTube and Yelp. Facebook has more than 901 million users, and is an especially effective way to reach adult consumers. In fact, one in three consumers say they’re likely to purchase from a company they follow on Facebook, according to eMarketer.com.

The benefits of social media are twofold for doctors. First, actively monitoring practice reviews and tracking social media conversations about orthodontics provides doctors with a better understanding of patient concerns and preferences. Second, engaging with current and prospective patients online helps to strengthen relationships, build trust and achieve thought leadership positioning.

Make it easy for prospects to find you. To increase search hits, always include your practice’s name on your social media platforms. Once social profiles are created, consider including URLs to those profiles in all of
your marketing collateral, such as business and appointment reminder cards, posters, t-shirts and mailers. When you’re ready to post content via your social media profiles, make sure it’s interesting and relevant to the adult audience, and engage with patients by encouraging them to comment, retweet or “Like” your posts. It’s also important to remember that social media isn’t just about pushing information out to potential patients, but fostering two-way engagement that will build trust, educate and ultimately drive patients through your door.

Discuss Third-Party Financing
A recent research study conducted by the Millennium Research Group found that the cost of treatment is the No. 1 barrier holding adults back from seeking orthodontic care. If parents are already investing in their child’s braces, they often wonder how they can afford it for themselves. Offering flexible financing options is a good way to ease financial concerns. Orthodontists should investigate available third-party financing plans that enable them to offer patients more affordable monthly payments over longer periods of time. This is especially helpful as treatment costs increase and treatment times decrease as a result of technologies such as self-ligation and digital solutions. Offering financing options helps increase case acceptance and cash flow, while decreasing accounts receivables.

Remember the “Why”
A common question doctors often hear from adults exploring orthodontic treatment is, “Why should I invest time and money in obtaining a better smile? I’m too old.” But the fact is orthodontics has come a long way from when adults were kids, thanks to decades of research and development. A good way to mitigate these questions is to stress the positive long-term effects orthodontic treatment can have on their lives. Nearly one-third of Americans say the first aspect of someone’s face they typically notice is his or her teeth. Underscoring the point, a recent perception study from market research consultancy, Kelton, found that when looking at images of other people, American adults perceive those with straight teeth to be 45 percent more likely than those with crooked teeth to get a job when competing against someone with similar skill sets and experience. Furthermore, the same study found people with straight teeth were 58 percent more likely to be successful, and wealthy.

Most doctors know the importance of detailing the oral health and self-confidence benefits of a better smile, but it’s equally as important to stress how an improved smile can help potential patients increase their chances to excel in the workplace and live more fruitful lifestyles. Remember, it’s never too late for your adult prospects to look their best.

Ormco, AAO and You
The eligible adult treatment population represents a lucrative and largely untapped opportunity. Doctors who are motivated to understand what appeals to this particular market segment will see more patients in their chairs and increase profitability. The emerging trend of adults seeking orthodontic treatment is not slowing down, and orthodontists have more support and resources to treat this patient population than ever before. By leveraging marketing assets and advanced treatment solutions from Ormco, as well as materials from the AAO’s recent campaigns targeting the adult market, you will have a significant opportunity to demonstrate your dedication to improving the smiles of adults and make your practice even more successful.
### TECHNOLOGY SYMPOSIA

#### Passive Self Ligation • Digital Solutions • Class II Correction

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