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PRACTICE SPOTLIGHT: Dr. Tarek Abousheta

THE PROTOCOL MAGAZINE™

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CLEAR21 FIRST LOOK

Earlier, Earlier, Earlier

FINISH WITH THE BEST...FINISH EARLIER!

Drs. Tom Pitts & Duncan Brown

Sister Act – In the Habit of Excellence

Drs. Karen Guinn & Karla Thompson

*Actual Patient Treated by Dr. Tomas Castellanos

ARTICLES BY: Drs. Rael Bernstein and Fayçal Ziane

THE PROTOCOL™

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Stunning Results with Short Treatment Times

Tom Pitts D.D.S., M.S.D.

déjà vu: a feeling of familiarity, and déjà vecu (the feeling of having "already lived through" something)

Yogi Berra was a true baseball icon, and a real character. His "It's like déja vu all over again", is a most appropriate way to describe one of the challenges facing today's orthodontist…the desire to finish cases more efficiently and beautifully.

Early in the year 2000, after having spent a number of years consulting with orthodontic practices around the country, and having personally witnessed the impact of inefficiency on the profitability and morale of orthodontists and their team members, I called for a **"new model of economy"** in orthodontics.

Déjà vu today…

The pressure from our patients to finish cases more quickly, has never been greater. This is compounded by the current reality of the orthodontic economy for many practices, and the patient's rightful desire for **"Superior Esthetic Results"**. This paradox of getting the highest quality finishes in a reasonable number of appointments continues to haunt many orthodontists.

Before we discuss more about efficiency, I must say, that "stunning" facial and smile esthetics, (making the most out of the patient's anatomy) is of utmost importance to patients and me. For me, it is important to state, "Fixed Appliances" are still very **relevant**.

I find that in most non-extraction cases, I can now set up the smile with fullness of the lips, esthetic arch form, proper labial lingual inclination of incisors (no flaring of incisors), full incisal display with curved smile line (smile arc), typically in five to seven appointments. This is extremely difficult to accomplish with aligners exclusively on many cases. Especially on cases that require greater extrusion of the upper anterior teeth and widened molar width. Of course, we still strive for an ideal occlusion.

The following case is a good example of stunning esthetics done efficiently.

INITIAL

Photos Courtesy of Dr. Tom Pitts

In addition, for patients who have extraordinary circumstances, (weddings, recitals, Bar Mitzvahs, modeling jobs, acting, etc.) and we are in a time constraint, we can set up the beauty and smile esthetics in four to seven appointments, then go to "In-house", inexpensive aligners, to complete minor detailing. I'm excited about a new in-house aligner company (Ulabs). We are beta testing a combo treatment at this time.

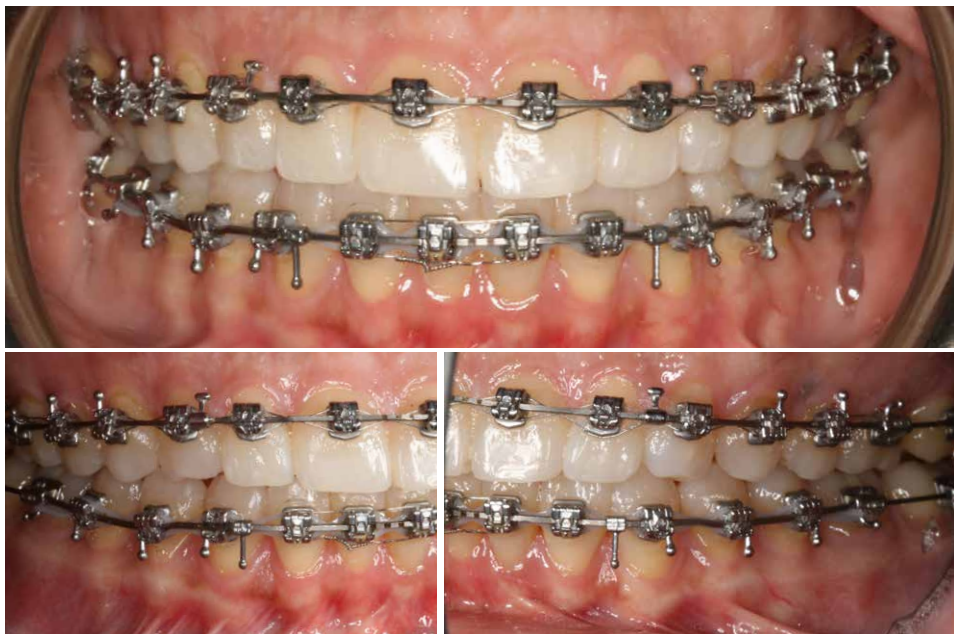
Efficiency and Effectiveness

Loading is the term I coined to describe adding extra appointments to a patient's treatment, and the impact upon scheduling of those unproductive appointments. I found it was not uncommon to add six to twelve appointments per case, that today, with our case management strategies, can be avoided. By using my special "Active Early" case management practices, we can literally save thousands of unproductive appointments in a year, and still deliver a superior esthetic and occlusal treatment outcome. Unloading appointments, and accelerated treatment times (with light forces) is a key to exceeding the patient's expectations, to shorter treatment times, practice growth, and long term sustainable financial success. I also see it increasing the "passion" of the orthodontist and team.

My experience shows the number one motivator for patients to seek orthodontic treatment is related to esthetics, which is well supported in the literature. I have been working for almost 50 years on the progression from good to outstanding esthetic outcomes. This requires discipline in execution of our new esthetic based diagnosis and application of "Active Early" case management. I have found that early 3D control is of the utmost importance, therefore the brackets and wire pairing, bracket position for esthetics and occlusion, becomes mandatory to finish early.

SAP/VID++
Antonia Initial Bonding
4/17. TTB Cl III+ Rainbow

8 MONTHS
U-L 20x20 Beta Titanium
Remove Bite Buttons



"It's like déjà vu all over again"
-Yogi Berra

10 MONTHS

13 MONTHS

Photos Courtesy of Dr. Tom Pitts

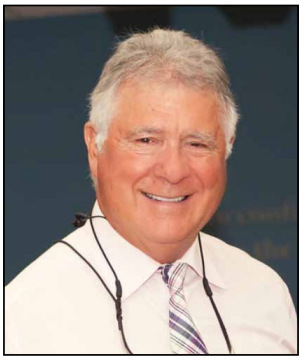
I love Passive Self Ligation for many reasons, however, rectangular slots and rectangular wires really slows my finishing down. It is very difficult to fill the slot with a rectangular wire, when getting into Stainless or Beta Titanium wires, hence the reason I created Pitts21.

With light forces we can "fill" the slot with .020 x .020 wires. This has greatly affected our efficiency. See Dr. Wassim Bouzid's cases with Pitts21 in the following article, they will blow your mind!

In addition to square wire finishing, the basic principles, of my case management, are very important: Pre-bonding recontouring of enamel, SAP/VID bracket placement (smile arc and vertical incisal display), immediate light short elastics (ILSE), proper disarticulation, neuromuscular exercises (prn), repositioning early, wide arch form, micro esthetic refinement, CO/CR co-incidence, over correction where necessary, and thorough retention techniques. We have honed these applications, improving the treatment quality, and the treatment time.

The goal is to deliver a beautiful finished result, in fewer appointments with shortened treatment times, and simple case management with greater 3D control. Square wire finishing has been shown to have 3D control much earlier, than rectangular wire finishing, with less force.

Let's get started, don't procrastinate.



Tom Pitts D.D.S., M.S.D.

Initial

Final

EARLIER, EARLIER, EARLIER...

Finish with the Best... FINISH *EARLIER*

Tom Pitts D.D.S., M.S.D.
with Duncan Brown B.Sc., D.D.S., D. Ortho

Motivation and Concerns when seeking Orthodontic Treatment

It is widely accepted that a primary motivator in seeking orthodontic treatment, is facial and smile esthetics, with the hope of positively influencing the patient's "well-being"[1]. Patient's and parent's reservations regarding orthodontic treatment varies, however most patients dislike extended treatment time[2].

Concerns from patients regarding the duration of treatment usually start before treatment begins!

The challenge facing Orthodontists is achieving optimal esthetic outcomes in the most efficient manner, that is gentle to the patient, and is a positive patient experience.

Improving Results, Enhancing the Patient Experience, Improving Efficiency *EARLIER*

In our teaching we have advocated an approach of, **"Get GOOD before you go FAST!"**. The primary focus of Orthodontic treatment should be the delivery of "WOW" worthy esthetics resulting in a healthy beautiful smile that lasts a lifetime while enhancing a patient's self-confidence, and personal esteem.

Patients want to be the "hero" in their own story, and we strongly advocate using quality digital imaging and video as a means of cementing the patient as the protagonist in their orthodontic journey.

Photos Courtesy of Dr. Wassim Bouzid

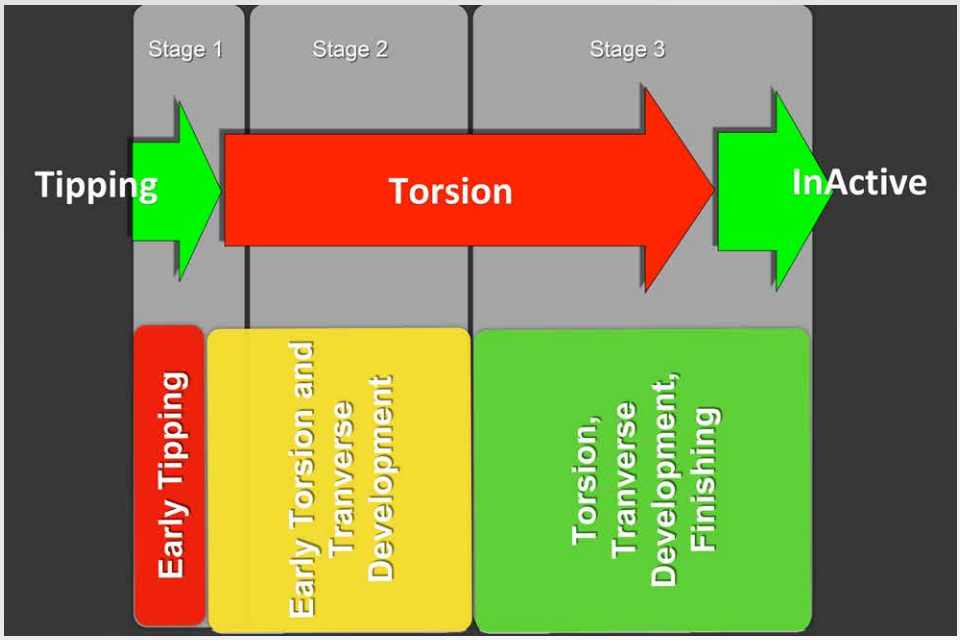


Fig. 1 - Stages of treatment "Active Early" Torsional Model

Taking "every patient/every appointment" photography, supplemented by periodic video interviews, and marketing directed "glamour" photography places the patient as the focus of the action. This approach involves the patient as a "co-author" in their treatment rather than a passive recipient of an orthodontic service. It's also demonstrating uncommon levels of "care and attention" to detail, which are highly correlated with patient satisfaction[3]. Levels of patient pain and discomfort are negatively correlated with patient satisfaction, so we advocate simple mechanics with gentle forces being applied during treatment.

In each version of The Protocol we have presented "Active Early" case management strategies that are able to improve efficiencies in treatment, and even more remarkable results being attained using Pitts21 system including brackets and wires[4].

In this article we will explore how to attain these strategies ***EARLIER***, and some of the adjustments you can make to leverage the inherent benefits of the Pitts21 system into finishing ***EARLIER***.

Some Principles Remain the Same to get *EARLIER* Control

I have advocated the use of a **PSL** bracket system for well over 20 years, because it reduces the practitioner's induced variables that can lead to longer treatment times. It also allows me to do more cases non-extraction. The principle goals of fewer appointments per case, less time per adjustment, greater patient comfort, better control of the teeth (teeth are either engaged or they are not), and greater simplicity in mechanics are all applicable today[5]. With rectangular PSL, it was taking me additional appointments with wire adjusting.

The "Active Early" treatment protocols that we developed to compensate for shortcomings in any rectangular slotted PSL appliance which is fundamental in achieving these goals[6], has been very useful for many orthodontists.

One of the things that I most enjoy about our profession, is that there is always something new for me to improve. I expected development of the Pitts21 "progressive" slot bracket, the Pitts Broad arch form and an "Engage Earlier" AW progression strategy would provide benefits from enhanced 3D control, ***EARLIER*** in the treatment cycle, but I was actually surprised by how wonderfully effective this combination is.

Today's article will explain why we believe this occurs, and is superior to any rectangular slotted appliance.

Fewer Treatment Stages and *EARLIER* Control

Simply stated, the sooner that 3D couples can be attained within the appliance system the earlier that 3D control can be attained. This is the goal of any wire progression strategy.

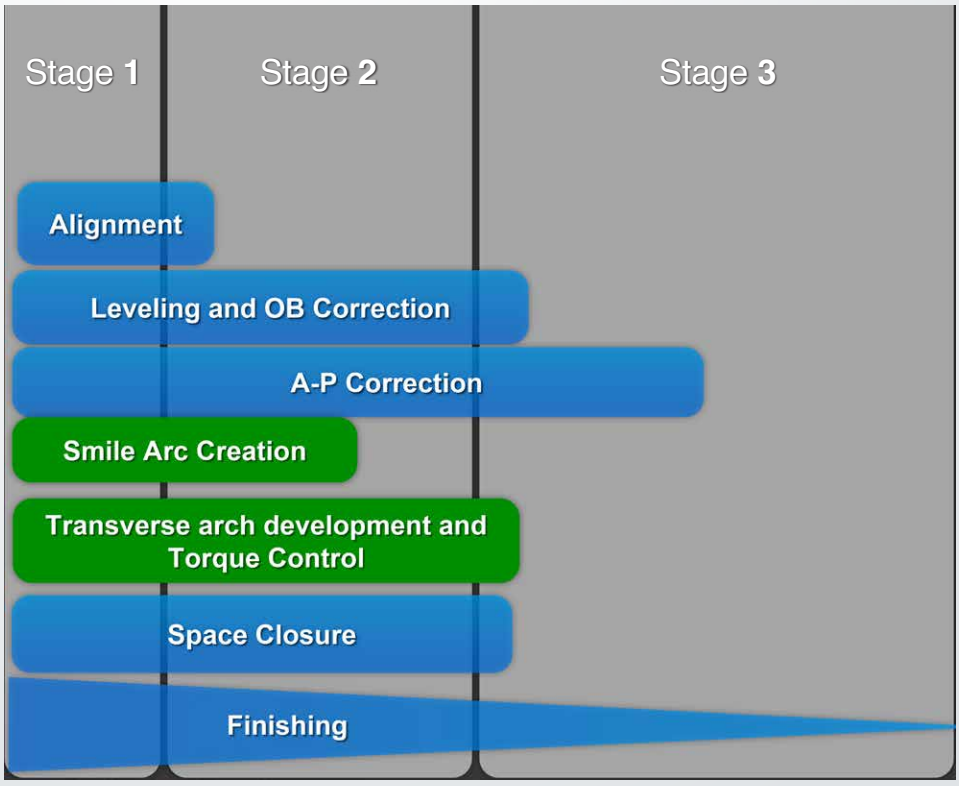


Fig. 2 - Simultaneous Mechanics

Figure 3: PRACM appointment (7 months, 4 appointments): Smile Arc is developing and excellent control of axial inclination with tipping and early torsion mechanics

Photos Courtesy of Dr. Duncan Brown

Conceptually the Pitts21 system involves **3 Stages** of treatment based on the profile and properties being used: **Stage 1** using initial round non-adjustable Thermal Activated Nickel-Titanium (TA NITI) round wires (.014 TA NITI). **Stage 2** uses square non-adjustable .018 x .018 Ultra-Soft TA NITI. Then in the same stage we move to .020 x .020 NITI and torquing and rotations are done quickly. **Stage 3** uses .020 x .020 Beta Titanium wires to finish. The system also includes .019 x .019 Beta Titanium or Stainless Steel. We Stainless Steel for extra widening of the arches or closing spaces. .020 x .020 Stainless Steel can also be used for extra arch development on the upper arch. So the four wire sequence is very efficient and effective.

The impact of these refinements is to encourage greater control ***EARLIER.*** There is a collateral benefit in that the number of wire changes is reduced, that decreases costs of delivery and shortened treatment times.

Applying the concept of **"simultaneous mechanics"** accelerates occlusal improvements and esthetic outcomes.

Pre-Bonding Coronoplasty enhances 3D tooth positioning and delivers greater control *EARLIER*

We have advocated white tissue improvement with positive and negative coronoplasty before bonding for years as a means of

improving esthetic and occlusal outcomes. With the broad availability of soft tissue lasers, pink tissue revision has improved the orthodontist's ability to place brackets in optimal positions and gain better outcomes[7]. This discipline increases in importance when using an appliance as precise as Pitts21.

Many Orthodontists are under the misconception that coronoplasty merely improves the esthetic outcomes, but that is not the only benefit. As Pitts21 is 2 1/2 times more precise than any rectangular slotted appliance, delivered tooth movements are highly dependent on where the bracket is placed on the tooth. Critical esthetic features like "flow", smile arc, and "incisor dominance" are best achieved when tooth shapes are optimized first, and then the bracket placed on an optimized tooth form.

The Pitts21 *"Progressive Slot"* design affords great advantages

One major limitation of a rectangular slotted appliance is that incremental increases in arch wire profile are required to attain partial arch wire engagement to avoid excessive application of force couples within the appliance that are uncomfortable to the patient. This is true for both .022 x .028 and .018 x .025 slot depths. Orthodontists remain habitually entrenched in support of their respective chosen slot size. The reality is that the Pitts21 "progressive slot" has all the benefits and none of the shortcomings of either rectangular slot profile.

For those who follow, the **Pitts21 Users Group on Facebook**, hardly a day goes by without someone expressing their amazement at the results they are seeing. True 3D control, attained ***EARLIER*** is resulting in some truly dramatic early returns for those clinicians adhering to our "Active Early" case management protocols.

Pitts21 has exceeded all of our expectations, and we anticipate even more breakthroughs as we push the envelope of "square wire finishing", learn more about the appliance, and refine the protocols further.

Here is what we know so far.

Pitts "Active Early" Protocols delivers Greater Control *EARLIER*

After 20 plus years, SAP/VID (Smile Arc Protection, Vertical Incisor Display) bracket position is well established as a legitimate approach to improve esthetic and functional outcomes[8]. Optimal bracket position with a precise bracket saves appointments. SAP bracket position, in contrast to traditional approaches improves performance of the appliance controlling anterior tooth proclination. We continue to "flip" (invert) anterior brackets for cases where greater lingual crown torsion is required on the upper anterior teeth.

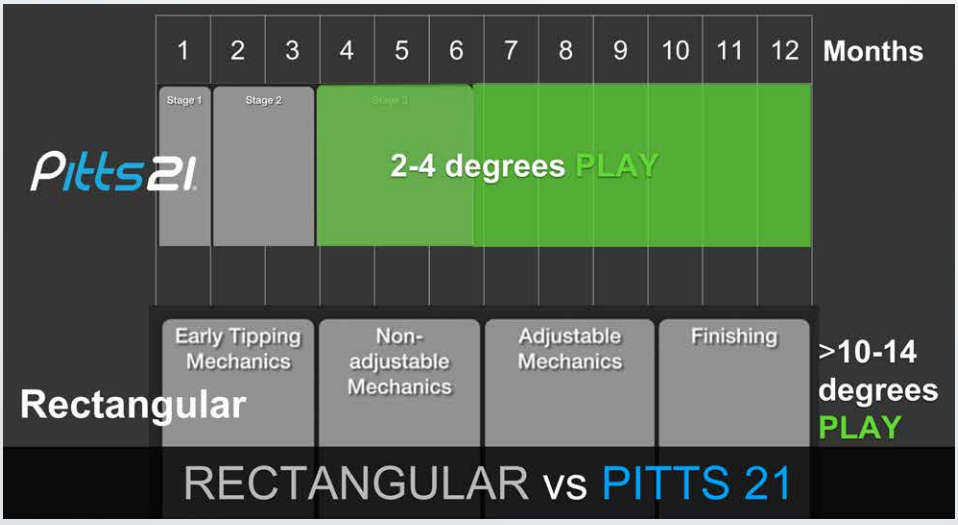


Fig 4: Upright Torsional Model: Pitts21 gains 2.5X better control 4X faster

Shorten treatment times with *"EARLY ENGAGEMENT"* arch wire progressions

The common goal for wire progression selection adopting the principle of **choosing an arch wire sequence that involves a minimal number of visits to get to a working arch wire** (where active couples are created in 3D to gain control) is one to which we ascribe[9]. However, we want the lowest forces possible in this arch wire transition.

In a rectangular slotted system, it is a requirement to spend many appointments gradually increasing arch wire size in an attempt to gain 3D control and avoid applying excessive force levels which are both biologically expensive and uncomfortable for the patient[10]. Most rectangular slot orthodontists do not fill the slot because of the high force level.

Research has been unable to identify a "preferable" arch wire sequence in rectangular slotted systems that is both comfortable to the patient and biologically gentle[11].

Those who knew Dr. Charles Burstone appreciate his depth of knowledge in the application of force systems and moments to orthodontic mechanics. One of his less "well-known" concepts was termed the "variable modulus" concept[12], where essentially full-sized arch wires of varying metallurgy were employed in an attempt to minimize appointments and changes in wire profile as a means of increasing efficiency.

Dr. Burstone explained this as an approach where, "wire size remains relatively constant, and the material of the wire is selected based on clinical requirements". This approach has not been highly successful in .018 or .022 appliances as to be effective for full engagement, the arch wire had to be sufficiently large enough that much of the potential benefit of "hi-tech" wires were mostly negated by the excessive forces generated.

In the Pitts21 system, we have taken a novel approach to wire pairing, in what we are calling an **"Engage Early"** arch wire progression strategy.

A square slotted appliance affords fewer arch wire changes to achieve "full size" working arch wires, while simultaneously reducing the force levels in the system. When combined with "variable modulus" concepts by offering Ultra-Soft TA NiTi, TA NiTi, and Beta T wires in effective profiles, minimal arch wire changes are needed for full engagement. This is more efficient, and simultaneously more comfortable to the patient. For those clinicians that desire SS arch wires they are available in .019 x .019 to enable space closure during sliding mechanics, or adjustments to arch form. As I stated, some use upper .020 x .020 Stainless Steel for extra width control but not if the upper brackets are flipped.

This approach to wire pairing, reduces the number of appointments without increasing either the biological cost, or discomfort to the patient. **At the present time, with Pitts21, I'm in adjustable finishing wires for many cases as early as 4 to 5 months into treatment.**

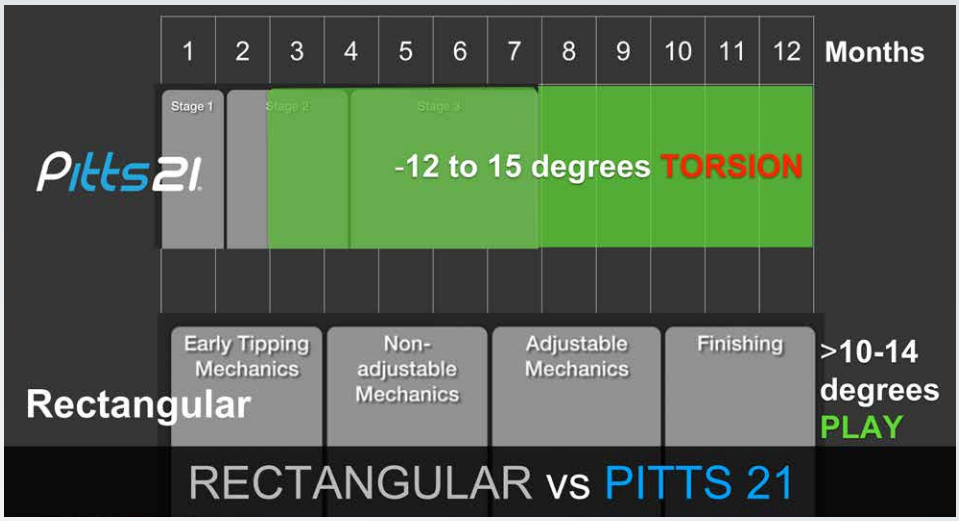


Fig 5: Flipped Torsional Model: Inverted Pitts21 delivers effective torsion < 8 weeks into treatment

Gentler treatment with *"EARLY ENGAGEMENT"* arch wire progressions

During the period of time I have been in practice, the understanding of an "optimal force" to move teeth has not changed all that much. Swartz's original concepts of "the force leading to a change in tissue pressure that appropriates the capillary blood pressure thus preventing their occlusion in the compressed periodontal ligament"[13], have been augmented through a better understanding of the "mechanobiology" of tooth movement.[14] Contemporary belief is that an "ideal strength" is one that evokes a cellular response aimed at restoring balance throughout the remodeling periodontal ligaments, and varies with root area, types of moments developed, alveolar bone level, and tissue responsiveness. The widely quoted 5 Nm (50 Gms) figure was derived from a single human study in 1960, and has become the stuff of legend. What is clear is that forces requisite to tooth movement are much lower than are delivered from common orthodontic force systems, and that application of forces heavier than the minimal required, do not accelerate tooth movement.[15]

Pitts21 brackets with a progressive slot, Pitts21 Broad arch wire suite, Pitts "Active Early" case management strategies, and an "engage earlier" arch wire progression approach makes a huge difference in fixed Orthodontic treatment efficiency, with lighter forces than are available in any rectangular slotted system.

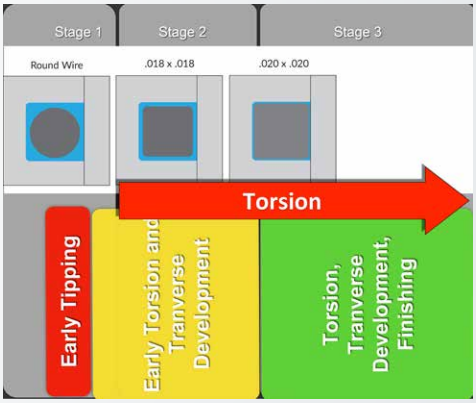


Fig. 7 – Treatment stages & Active Early torsional model with wire progression.

Satisfying patient desires for "WOW" worthy esthetics in shorter treatment times will secure the future of the esthetics capable orthodontist, and of our profession as a specialty.

Exciting times...'til next time

Fig. 6 – Arch wire progression chart

Photos Courtesy of Dr. Wassim Bouzid

Photos Courtesy of Dr. Duncan Brown

Author's Comments

Dr. Tom Pitts

Dr. Duncan Brown

"We knew that Pitts21 would perform well, but have been amazed with the results being attained by early adopters! Early Engagement of the appliance, combined with "Active Early" protocols is allowing dramatic improvements in tooth positions and esthetics very, very quickly. Shorter treatment times and superior esthetic as well as occlusal outcomes are within our reach!" - Tom Pitts

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Sister Act
In the Habit of Excellence

Karen Guinn D.D.S.
&
Karla Thompson D.D.S.

Introduction by Dr. Duncan Brown:

It is a delight to introduce Karen and Karla to the Pitts Family and The Protocol. There are more than a few parent/child orthodontic combinations around, but I personally don't know of another "sister act".

Karen Guinn began her journey as a patient at the age of 12, wearing braces as an adolescent. During her orthodontic treatment Karen's smile made her feel the best she could be. Karen instinctively knew that when her teeth were straightened it would make her smile more dynamic, and be a big self-esteem booster! At the age of 16, a native of La Jolla, California, Karen entered University of California San Diego (UCSD), and at the age of 19, she enrolled at Howard University College of Dentistry as a Doctor of Dental Surgery. In 1982, she received her certificate in Orthodontics at Howard University College of Dentistry.

Karla Thompson, entered University of California Los Angeles (UCLA) and then went to Howard University College of Dentistry for her Doctor of Dental Surgery. Karla received her certificate in Orthodontics at Howard University College of Dentistry in 1999. She loves her career and making awesome smiles daily in her practice in South Pasadena, California and is "giving back" to the profession as a part time faculty instructor at UCLA Orthodontic Department.

I have had the opportunity to know, work, and teach with Karen and Karla for almost 10 years. They are totally committed to enhancing their patient's lives through the miracle that is Orthodontics. Karen and Karla literally bring smiles where ever they go, and their perspectives on life and practice is most refreshing!

The research is overwhelming!

There is no disagreement regarding orthodontic treatment, that it can be a positive contributor to a patient's self-esteem. Attractive people are hired sooner, are paid better, are perceived as more trustworthy, are more likely to achieve promotion, and more likely to have attractive "life partners" than less attractive people. For many Orthodontists, it was an "eye opener" when research revealed that patients treated to excellent occlusal outcomes frequently had less attractive esthetic presentations after treatment than they had before! These facts encouraged us to pursue

a different approach to delivery of Orthodontic services, and ultimately led us to Dr. Tom Pitts.

Having closely followed Tom Pitts for many years, having completed the Pitts Masters in Finishing Program with Tom and Duncan, and participated in the Pitts Progressive study club, we have truly "drunk the Kool Aid". Using the Pitts Esthetic Discipline for diagnosis, and appreciating the value of the "dynamic smile" allows us to envision the end result at the beginning of treatment.

We employ a full breadth of contemporary orthodontic techniques; soft tissue lasers, mini-screws, esthetic bonding, Digital Smile Design (DSD), practical use of Aligners, to enable the patient to achieve their esthetic potential... but that is only a part of the story. Tom's influence has encouraged us to educate and engage our patients continuously using imaging and video, carrying the patient's emotional response to a higher level of appreciation of their personal beauty and value during their orthodontic journey.

We believe in the prominence of process in attaining results. The patient's experience of the process, will, to a great extent, determine their appreciation of the quality of the end result. We believe that focus on the Process of treatment can positively affect the patient's self-image during the treatment experience.

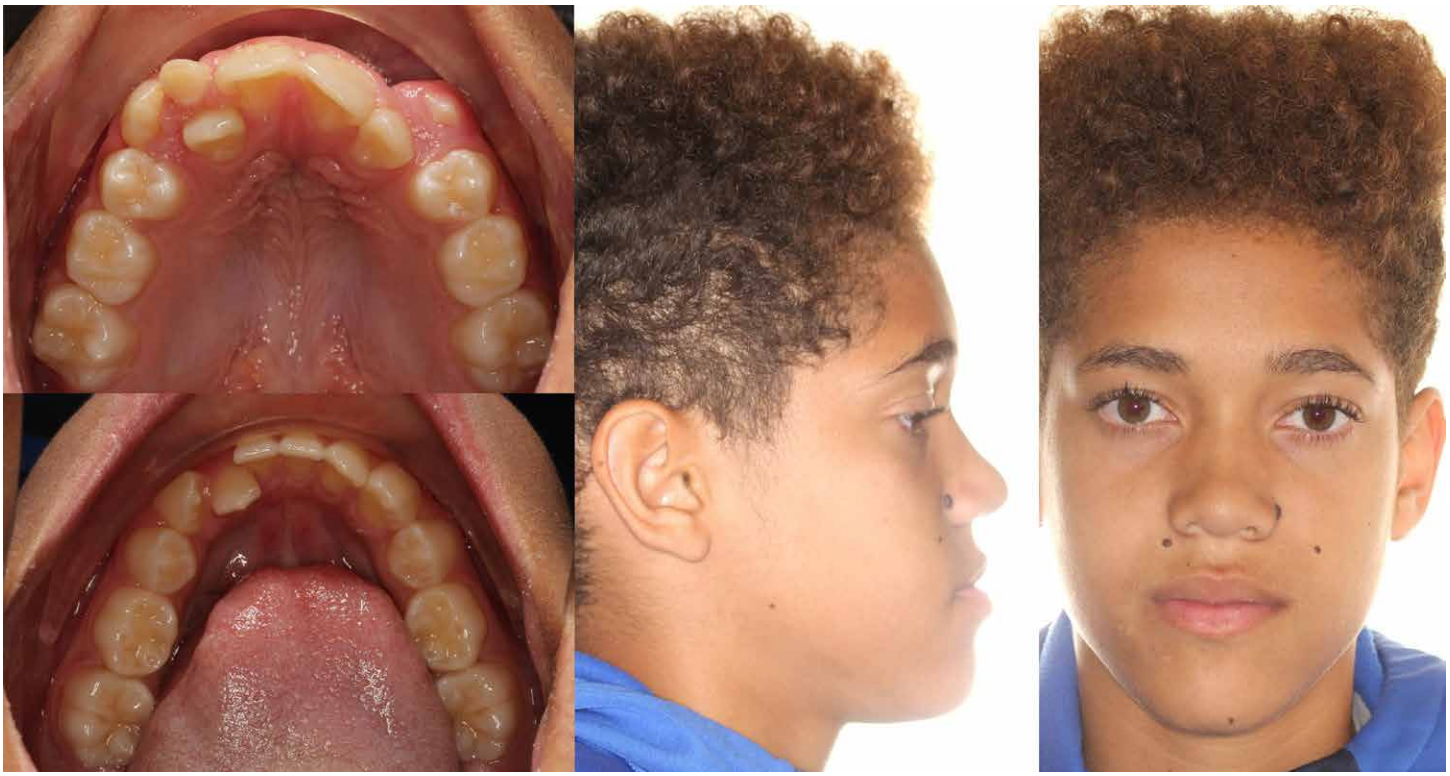
We are very excited to see the impact of Karen's "Digital Smile Center" and "Esthetic Facial Spa" on patient dynamics. We believe incorporating "anti-aging" protocols, and supporting healthy skin dynamics, will enhance the patient's emotional orthodontic journey while expanding the esthetic realm of orthodontic services.

Just as our orthodontic journey has just started, our family's orthodontic story isn't over yet!

Looking into the future: Karen's son, a Morehouse College graduate is now in Dental School at University of North Carolina at Chapel Hill. He is in his second year of Dental School, and has decided to take the path of orthodontics.

We are very excited to join Tom in an orthodontic future that fully engages the patient in an orthodontic journey that boosts their self-esteem and confidence through-out treatment.

Class III + Crowding



Photos Courtesy of Dr. Karen Guinn

Photos Courtesy of Dr. Karen Guinn

Progress

Photos Courtesy of Dr. Karen Guinn

Progress

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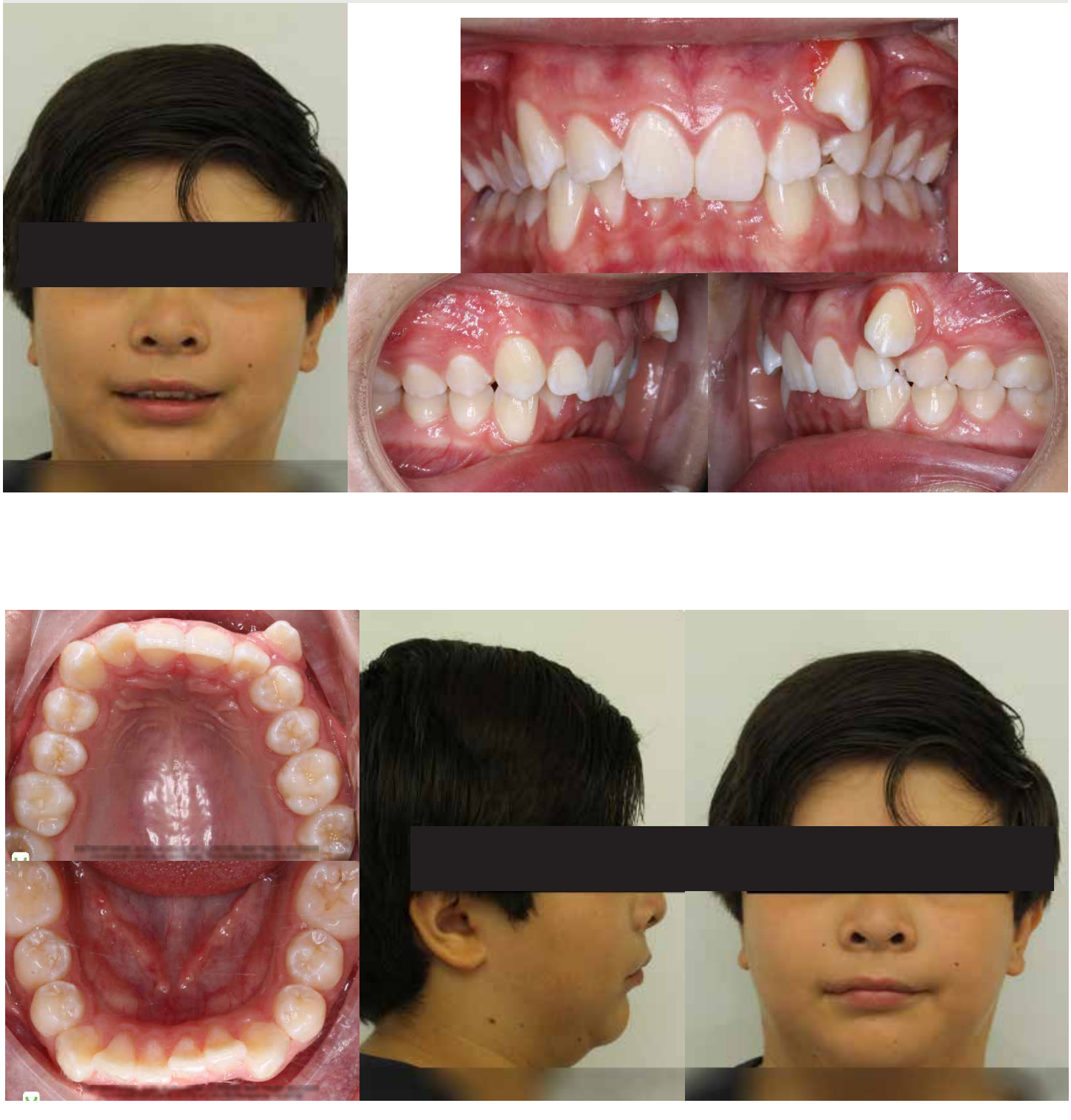
Photos Courtesy of Dr. Karen Guinn

Initial Photos



Photos Courtesy of Dr. Karla Thompson

Initial Photos

Progress

Photos Courtesy of Dr. Karla Thompson

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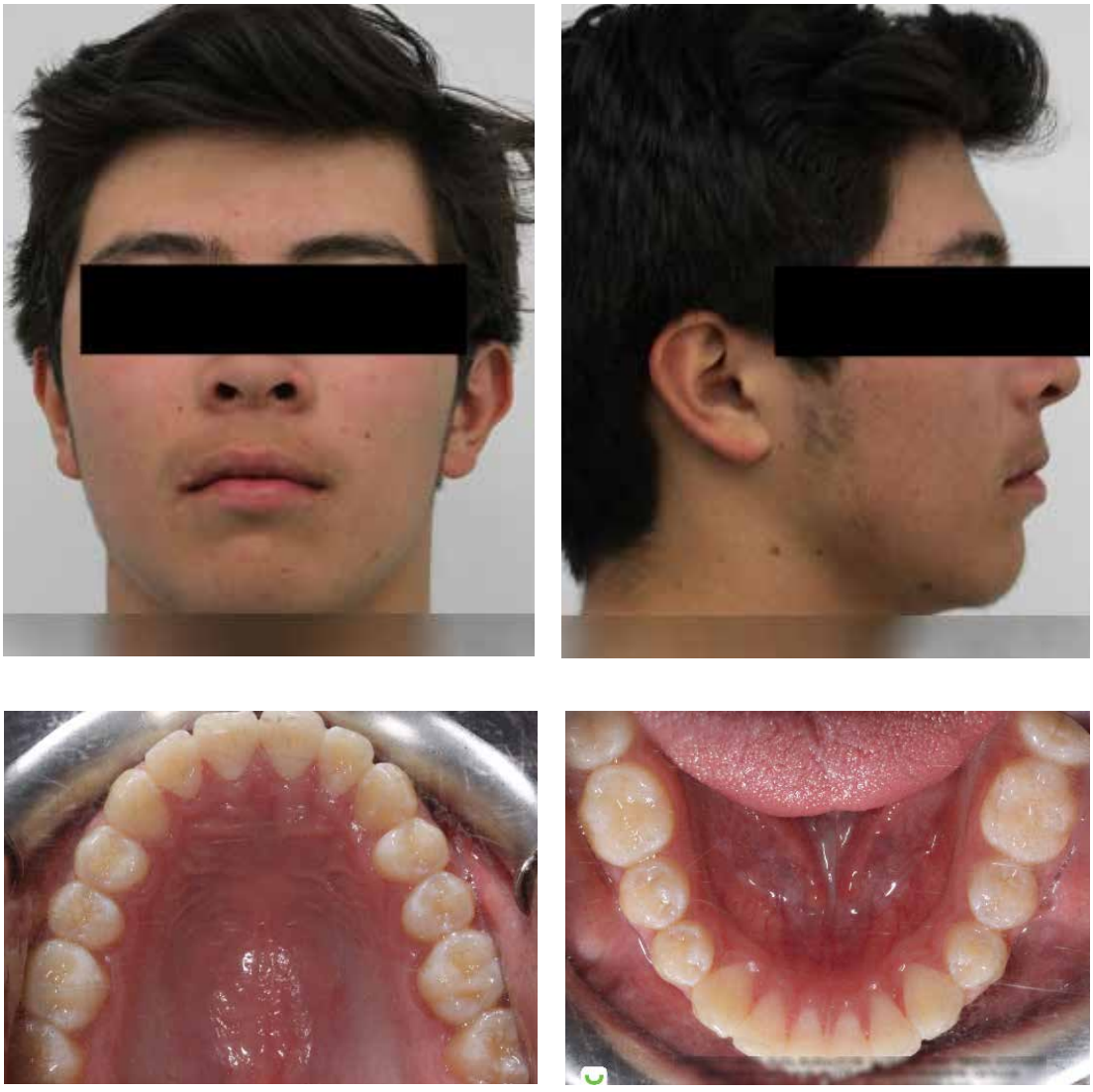
Photos Courtesy of Dr. Karla Thompson

Final

Photos Courtesy of Dr. Karla Thompson

Final



Photos Courtesy of Dr. Karla Thompson

Photos Courtesy of Dr. Karla Thompson

EVOLUTION IS A REVOLUTION

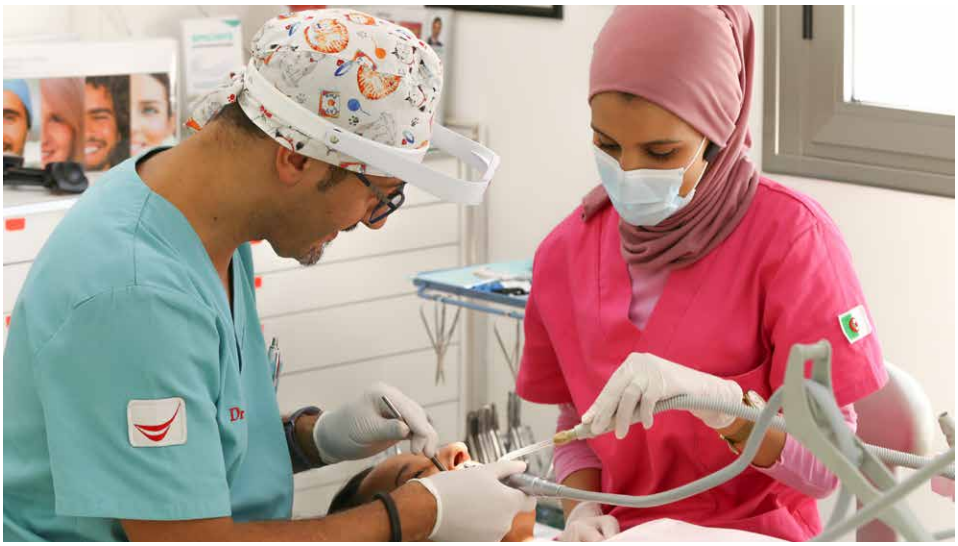
Fayçal Ziane D.D.S.

When your mind is open each day presents much to be grateful for, and I'd like to share some of those with you.

Mornings start with hugs from my supportive, beautiful, and loving wife, Soraya who is the rock upon which I rely, and she has built a home which is a refuge for myself and a nurturing environment for our wonderful girls Melinda, and Kenzy. My long-term goal for their future is to keep them from dating Wassim's boys!

When I head off to work, I have the opportunity to work with my father. After completing orthodontic studies in France, my father, a dental implantologist, and I decided to open a group practice in Oran, Algeria. A trans-disciplinary clinic was a "first" in my country, and it has now evolved to include a "state-of-the-art" dental training center, and full-service prosthetics laboratory. I am eternally grateful for my father's inspiration, knowledge, humility, collaboration and friendship!

All of us are the sum of our experiences with family and friends. When Ilies Tibaoui and Wassim Bouzid proposed that we take the Pitts Masters in Finishing Program together, I was conflicted. I have attended numerous training programs in the past and none of them really impacted my practice. The revolution of change started as soon as I met Tom Pitts... an unforgettable moment; a young foreign trained orthodontist, meeting an international luminary such as Tom, and finding him an open, humble and fully accessible person. Tom and Duncan brought a tsunami of information, science, human relations, emotions but above all, an orthodontic revolution! Robin Sharma has said about change,



"It's hard at first, messy in the middle, and gorgeous at the end!" For me, the change has been just gorgeous, and the first two stages were largely absent, thanks to the support of my family, friends, Tom and Duncan.

esthetic balance in pink and white tissues, the natural and attractive presentation of the smile following Tom's "Esthetic Discipline". Our patients want that "WOW" smile, and their happiness encourages us to improve ourselves every day. Tom brought us that passion!

My team was surprised by the ease of the protocols, and gentleness of delivery. I actually fielded questions of, "Why did you wait so long to use this technique?". I replied, "I was waiting for Tom Pitts to create it!"

All of the trans-disciplinary specialties in our clinic have been inspired by the smile arcs, the full buccal corridors, the "flow" of

This orthodontic **esthetic "revolution"** is only at the beginning. With my second master course, Duncan Brown, spoke about the integration of the principles of Digital Smile Design (DSD), and incorporating digital orthodontics into both fixed appliances and aligners, which will allow Tom's esthetic vision to continue to evolve over the next few years.

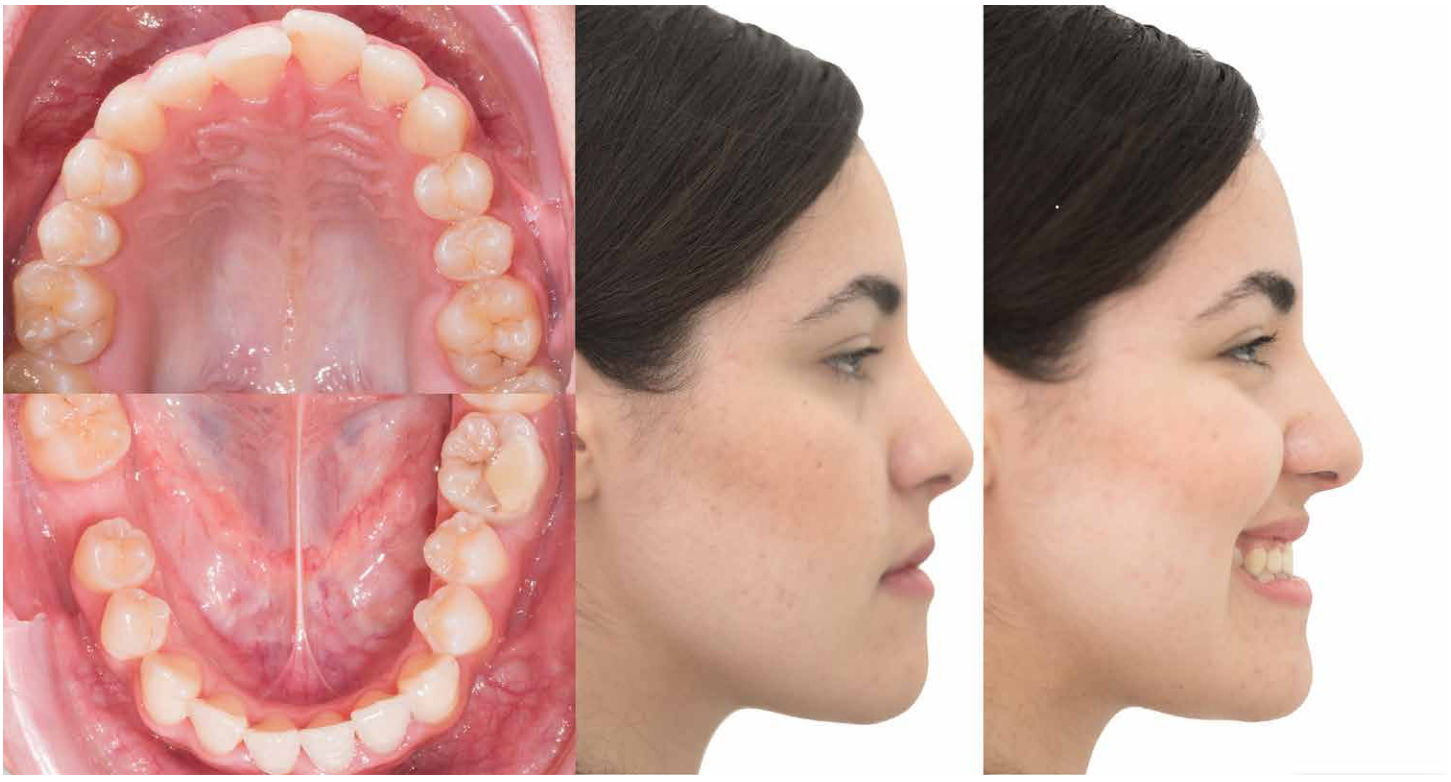
Simon Sinek, the author of "Start with Why", has said, "If you understand people, you understand business."

Tom Pitts and Duncan Brown opened my eyes and mind, with their love of people, teaching and sharing. Their influence allowed me to develop personally and strive for excellence by improving the performance in my orthodontic clinic and the trans-disciplinary Academy I share with my father

I truly have much to be grateful for!

Photos Courtesy of Dr. Fayçal Ziane

Class III + Facial Assymetry



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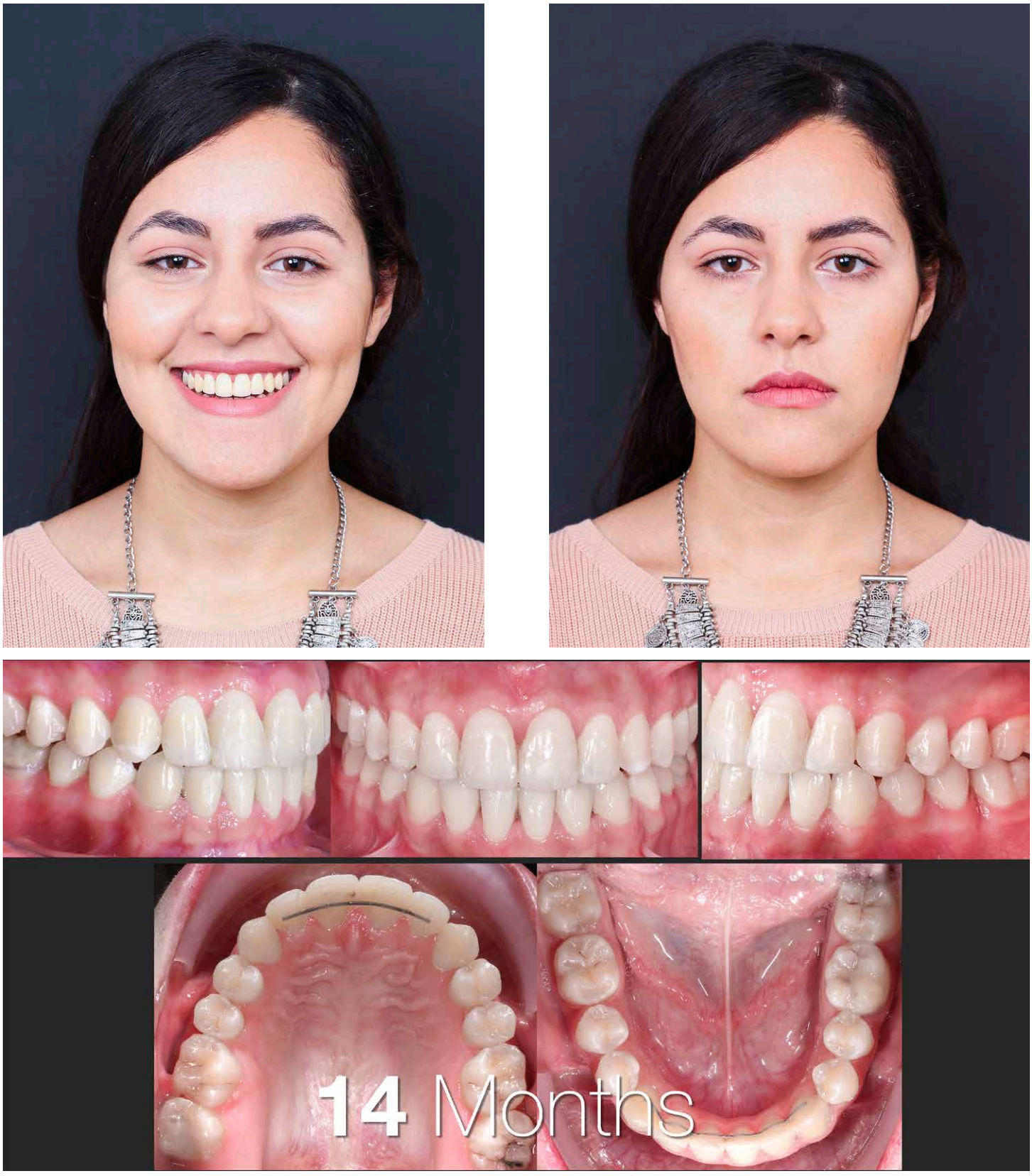

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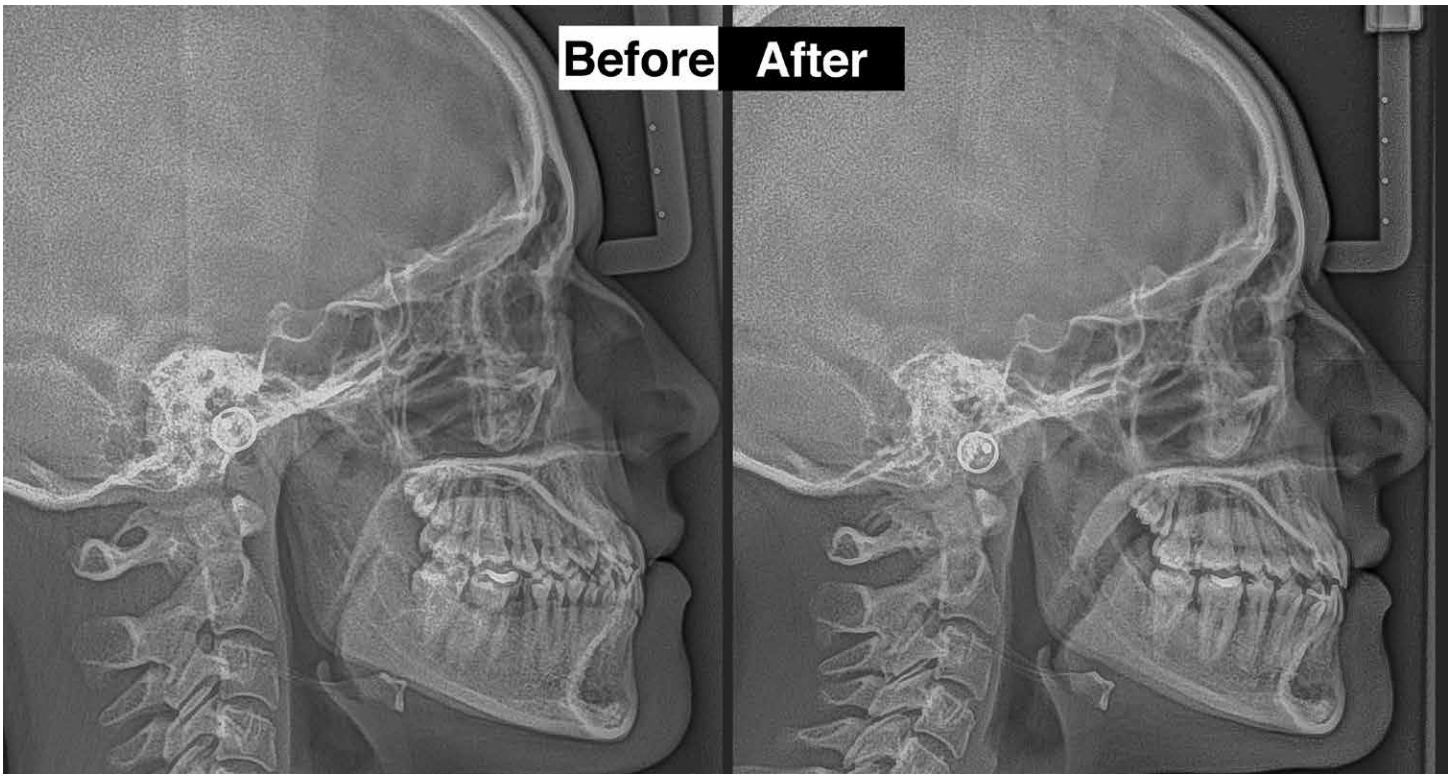

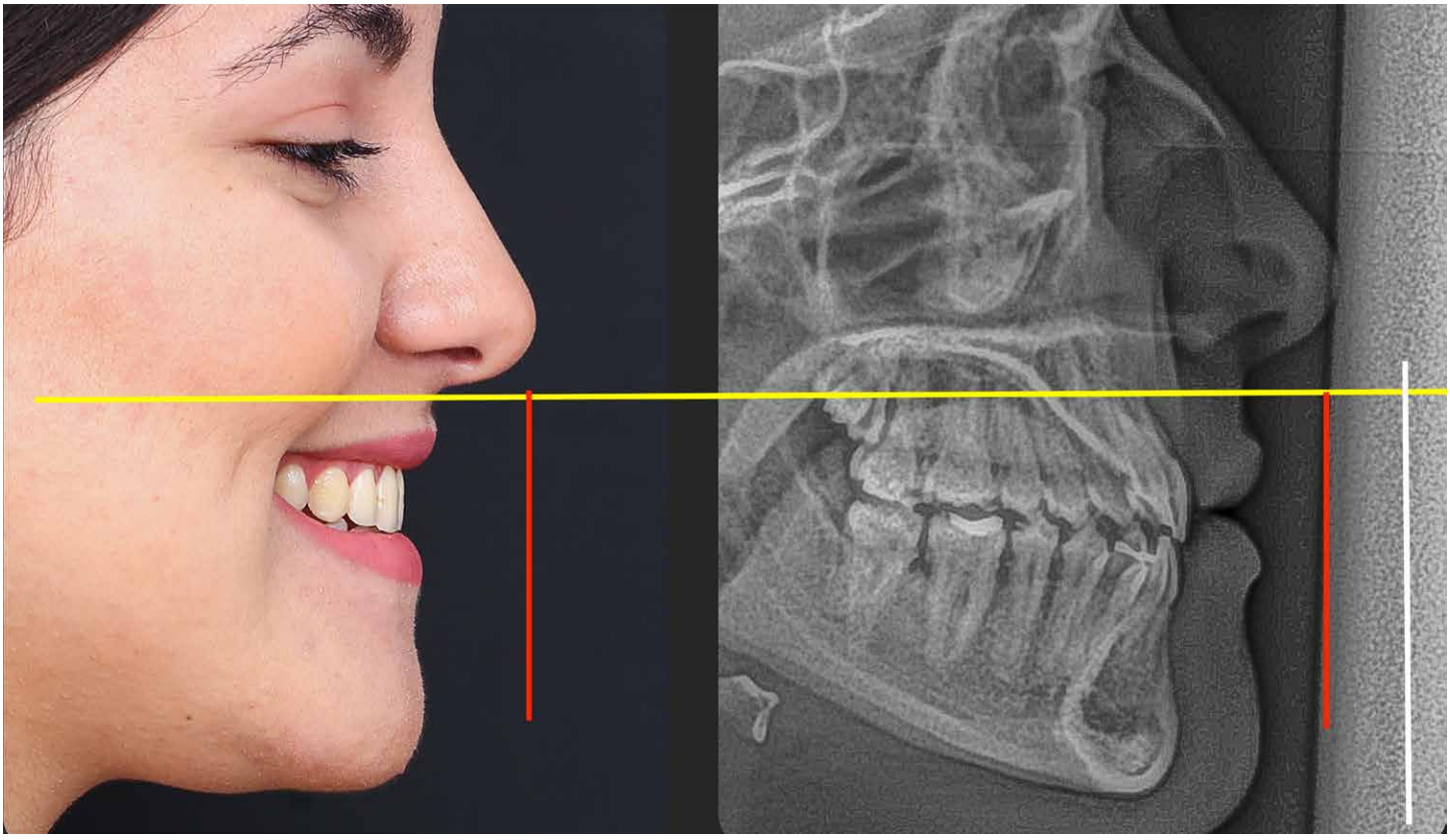

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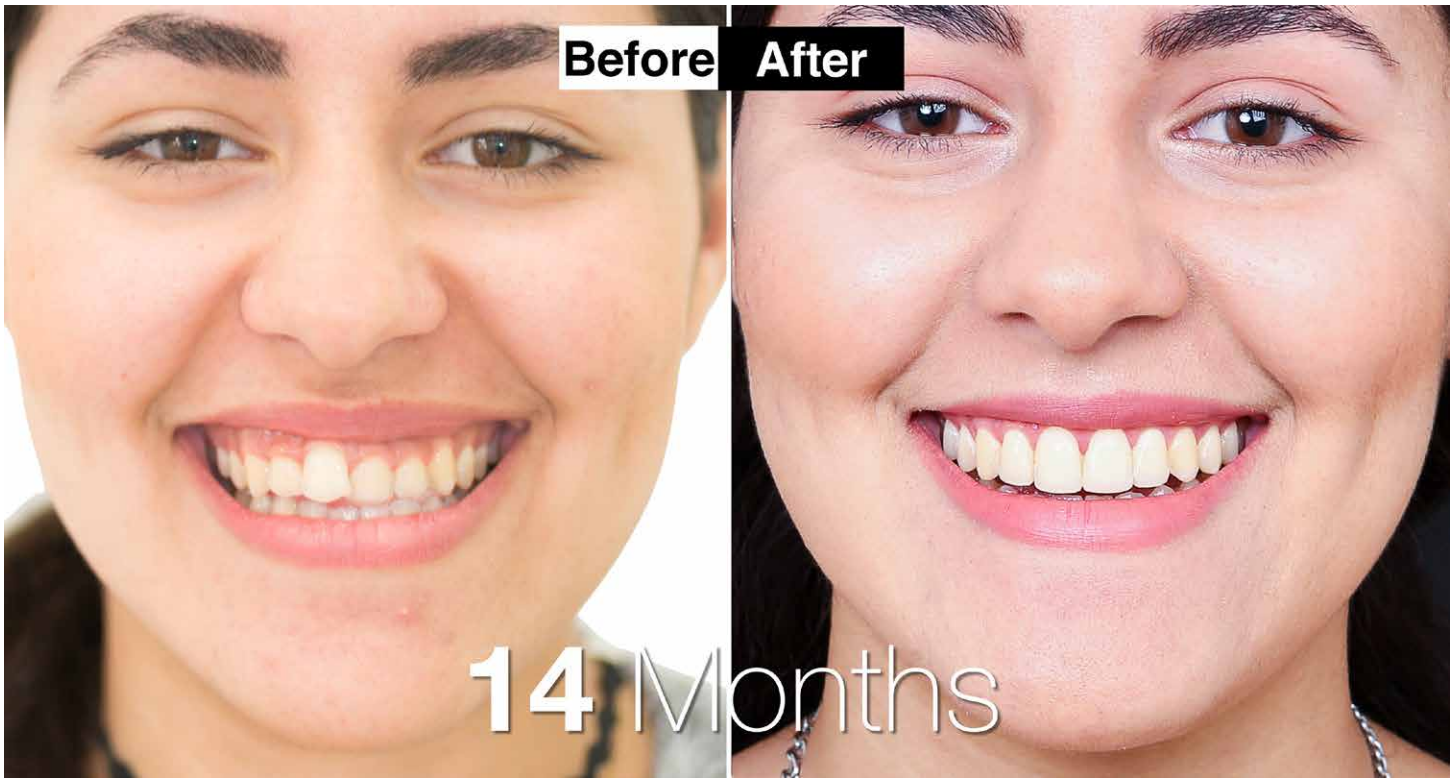


Photos Courtesy of Dr. Fayçal Ziane

“It’s hard at first, messy in the middle, and gorgeous at the end!” - Robin Sharm

Photos Courtesy of Dr. Fayçal Ziane

Class III + Facial Asymmetry

14 Months Start to Finish

Photos Courtesy of Dr. Fayçal Ziane

Accelerating Orthodontics Through Precision and Increased Efficiency = Beautiful Results

Tarek Abousheta D.D.S., M.S.D.

My story,

Towards the end of high school, I was presented with the dilemma "what do I want to be for the rest of my life". Observing my dad who is an engineer, and my mom who is a doctor, only added to my confusion. On one hand, I always appreciated the satisfaction of solving a problem, but on the other, I also enjoyed the gratitude received after improving someone's life. This led me to dentistry as a great combination of engineering, art and medicine.

While in dental school in Egypt, I started to realize that every smile is a piece of art. I noticed the subtle differences between various types of "beautiful smiles," although I was not yet able to identify what made a smile beautiful. Throughout my years of education, I sought an understanding of the science behind a beautiful smile, and the dental artists behind the most attractive smiles led me to continuing my education in the United States.

While, I was visiting the University of the Pacific learning about their Orthodontic program, I had the opportunity to sit in on a lecture by Dr. Pitts. It was an eye-opening experience for me. I decided U of P was where I wanted to pursue learning about the Art and Science of Orthodontics.

Dr. Pitts was the first to show the residents at the University of the Pacific how to look at the face and evaluate facial features, and tailor the treatment to the facial aesthetics. I treated a few cases with Dr. Pitts during my residency, and one patient I will never forget. After seeing her outcome, she exclaimed "I look so much younger!" This proved to me that function and ethics can be achieved without compromise. I went on to submit this case (Fig. 1, pg. 40) as part of my board certification evaluation, demonstrating that great function and great esthetics are not exclusive.

I have so much more to learn but Tom showed me a pathway toward continual improvement.

Following my residency, I moved to beautiful Orange County, California, purchased my practice in Irvine, and continued to learn from Dr. Pitts and the group of amazing Masters Orthodontists. I became obsessed with understanding the science behind the art and increasing a great degree of precision to my practice.

In recent years, a new focus in Orthodontics has emerged around accelerating treatment by employing new techniques and devices. With a definite advantage in finishing faster, a host of new appliances and techniques have been added to the Orthodontic arsenal. There is still much to improve in terms of efficiency rather than just accelerating through an inefficient process. Some of the variables in the traditional orthodontics treatment include:

1. Typical manual placement of brackets
2. Progressing through the wires, starting with a round wire and gaining torque control as you get into rectangular wires with a progressive fashion of control when the system allows for a larger wire
3. Evaluating bracket placement at the 6-month mark with a panoramic radiograph
4. Correcting any root angulation issues
5. Finishing phase with detailing bends and elastics

Sequential mechanics is a great limitation. Every step contains inefficiencies that can be improved. Adopting the Pitts21 bracket system with its early torque control has been a blessing in my practice.

Where possible, cases with the .018 x .018 Ultra-Soft wire allowed for greater torque control from the start. We still start in an .014 NiTi in very crowded cases but progress as soon as possible to .018 x .018 Ultra-Soft.

The Pitts Protocols routinely address A-P and Vertical from day one with early elastics while capitalizing on the early enthusiasm from the patient. Using "simultaneous mechanics" the A-P is mostly resolved at the same time as the crowding unravels.

Recognizing the inefficiency introduced through human error in inaccurate bracket placement, I continued to look for ways to move the teeth to the right spot from the start. I recognized that the better the bracket is placed, the less need there is for later archwire detailing. Technology can help here. This precision has called for incorporating lots of different technologies:

- CBCT imaging to allow the accurate viewing of the roots in 3D space and in relation to the bony housing
- Intraoral scanner, to get an accurate 3D model of the teeth
- 3D printing and processing

By incorporating In-Direct Bonding, CBCT imaging, Intraoral scans, and 3D modeling software, I started placing my brackets digitally, which allowed me to receive instant feedback on its position based on how the final tooth movement was affected. Because the bracket base is standard, but the tooth anatomy is different, using this software (MotionView) allows me to place the brackets to an aligned tooth position. A custom bracket base on every tooth means the bracket doesn't have to sit flush on the tooth. I then started paying attention to rotations, correcting for that as well, while reducing the need for detailing bends as much as possible.

"Would I rather be feared or loved? Easy - both. I want people to be afraid of how much they love me."

- Michael Scott
The Office (Season 2, Episode 6)

For me, this has increased efficiency and controls the tooth movement to a great extent. Theoretically, this process can eliminate the need for repositioning and the detailing of the wire, cutting down the treatment time by 3-6 months (3 months from bracket repositioning and dropping to NiTi if necessary, and another 2-3 for less detailing).

One of the first cases (Fig. 2, pg. 42) I employed all these techniques and technologies together is a case of a 10-year female, presented with:

- Severe crowding with blocked out LL3
- Narrow arches
- Deep bite with deep Curve of Spee
- Class II occlusion

Mom had several consultations from other local orthodontists, and they all agreed to extract 4 bicuspids. I initially agreed that extraction is a sound treatment plan, given the amount of crowding and the lack of space. However, I also offered to do a diagnostic treatment where we would unravel the crowding and decide on extraction as we reached her biological limit. I started with a maxillary RPE to provide space then bonded the upper and lower arch with short class II elastics. Using light forces and NiTi open coil springs I was pleasantly surprised we were able to open spaces with a combination of expansion, coils, and lower 2-2 IPR. 7 months after starting her in .018 x .018 Ultra-Soft wire, we were able to make room for all of her teeth and correct most of her Class II with a great arch development.

The small volume CBCT showed no need for bracket repositioning, but the torque on the LL3 needed to be corrected. At this point, she looked great and I was comfortable to finish with no extractions, and I was confident that I

Fig 1: Note the bracket placement on the LL3 with more space between the base and the tooth on the distal side to get the correct rotation

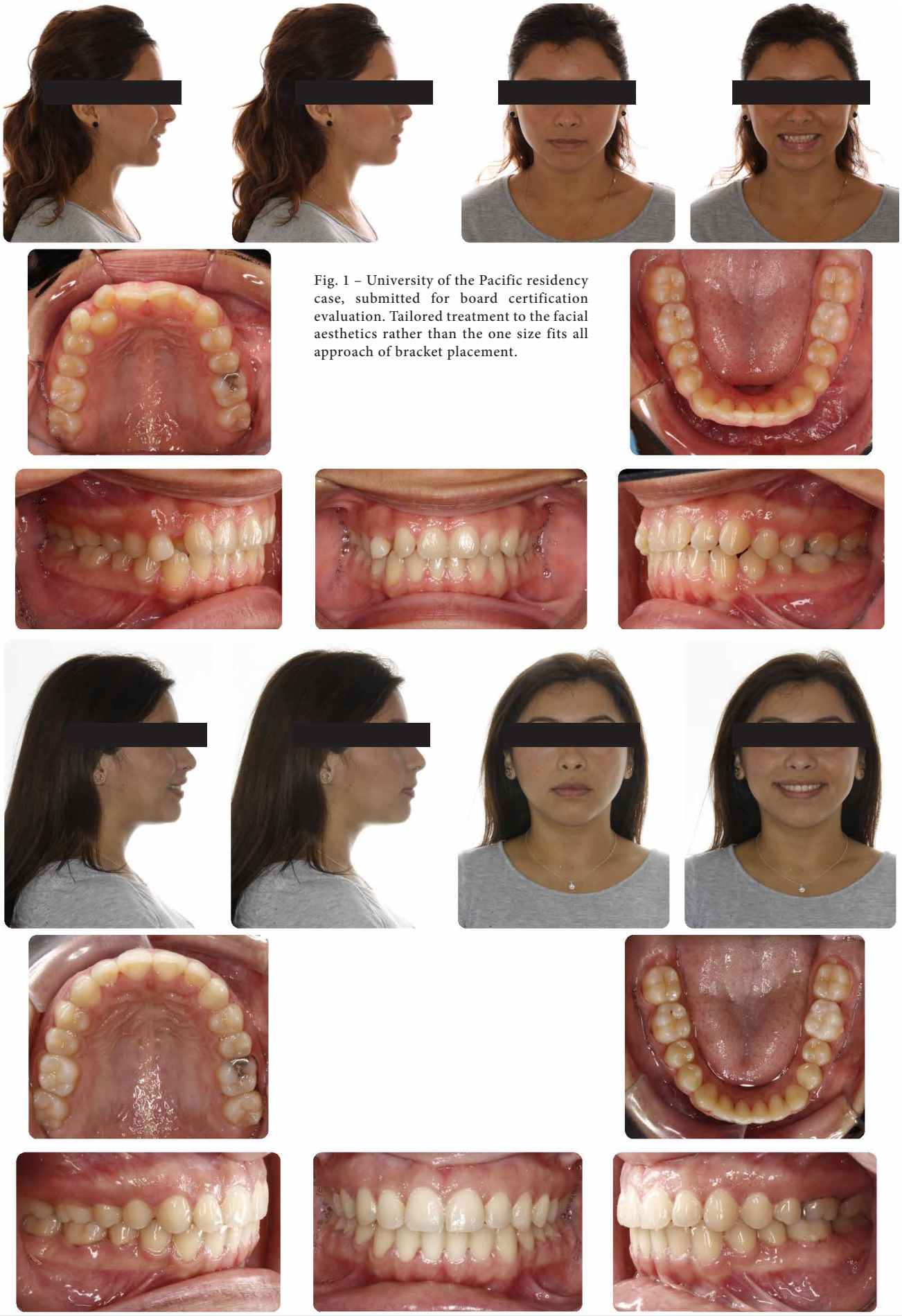


Fig. 1 – University of the Pacific residency case, submitted for board certification evaluation. Tailored treatment to the facial aesthetics rather than the one size fits all approach of bracket placement.

could finish in 6 more months or less. The Patient's cooperation decreased, but even with decreased cooperation we were able to finish in 18 months. Mom was very grateful and happy, and so was the patient.

There is always room for improvement, so by adding 3D printing in my office we now have the ability to make in-house aligners. I no longer have to accept these imperfections and in less than a week she can have her set of aligners with no attachments and still achieve great result. Incorporating all these technologies has taken my practice to new heights and sets me apart from my competition.

New technologies add another degree of precision and decrease inefficiencies, and in turn, predictably accelerate the traditional orthodontic treatment. I continue to evolve and learn every day and it is truly exciting times for Orthodontics. Some of the most commonly asked questions that I get asked:

Isn't this very time consuming, how long does it take you to do a setup?

Yes, it can be very time consuming, especially since the technology is evolving with continuous updates and many new pieces of software surfacing. However, for me, it is worth it. Overall it makes the treatment much more efficient, reducing my chair side time. I feel that I provide better service to my patients.

How much does the whole setup cost?

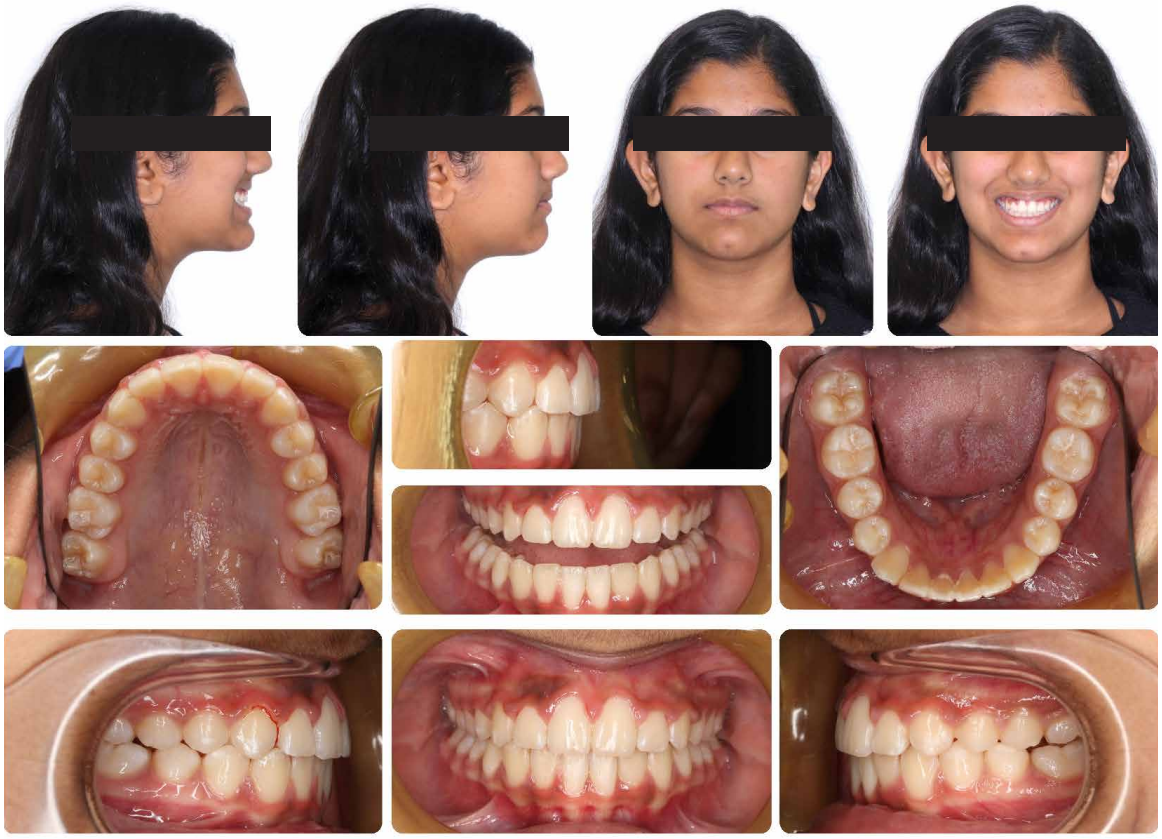
It depends, new equipment is available every day and prices are becoming much more affordable. Not having to take alginate impressions and using digital records not only saves on space, but also offers new possibilities, like replacing retainers without having to get the patient in our office or performing minor adjustments into the retainer. The savings are big and may potentially be a new revenue stream. Do not let the cost get in the way.

It's an exciting time to be in Orthodontics! Tom has said, "The golden age of Orthodontics is just ahead of us!" I believe him!

Photos Courtesy of Dr. Tarek Abousheta

Fig. 2 : 10 year female, presented with: Severe crowding with blocked out LL3, Narrow arches, Deep bite with deep curve of Spee, and Class II occlusion

Photos Courtesy of Dr. Tarek Abousheta



Treatment Sequence

RPE , 21 Turns
Bonded Upper and Lower 7-7
.014 NiTi Short 3.5oz 3/16 Non-Latex Class II U3-L5, Open Coil Springs UL1-UL3, LL4-1
.018 x .018 Ultra-Soft
.020 x .020 NiTi
Radiograph and Images at 7 month CBCT Volume 8 x 8 cm
.020 x .020 TMA, Class II Elastics 4.5 Oz. U3 -L6s

IRVINE ORTHODONTICS
AND CHILDREN'S DENTISTRY

4482 Barranca Parkway, Ste. 102
Irvine, CA 92604

Photos Courtesy of Dr. Tarek Abousheta

SWIM IN A DIFFERENT SEA

Don't Settle for Mediocrity

Rael Bernstein D.D.S., M.S.

Much of the talk in our industry these days seems to be about technology disruption and aligner companies marketing directly to orthodontic consumers. This was inevitable as advancements in technology have removed much of the barrier to entrance into the provider pool for **straight teeth**. Couple this with the proliferation and improvement of dental service organizations (DSOs) and there has never been a more crucial time to set ourselves apart. If we cannot produce something different (better), in a more efficient way, then I am afraid our relevance and time in this field will be greatly diminished. Let's stop complaining and deliver better!

All of these lab and digitally driven non-orthodontist options thrive on **mediocrity**. Due to their different profit margin expectations and cost structures, they can and will continue to straighten teeth cheaper and more conveniently than traditional orthodontists. The cases we are seeing now are becoming more and more challenging as primary care dentists and online aligner delivery companies handle the simple, straightforward cases, which will only become more widespread in the future. And as technology improves, they will be able to handle the more complicated cases as well. I do not wish to debate the ethics or legality of this fact but recognize that it is the new reality. We had better be prepared and ready for it.

How can we not only survive but thrive in the face of these challenges? The answer has to be doing what they cannot and providing something that the consumer cannot get online. We must offer something better than traditional orthodontics has been offering for so many years. The reason these new players grow so rapidly is because they give the consumer what they want: lower cost, better comfort (no unsightly and uncomfortable appliances) and faster treatment, all with more convenience. For too long, traditional orthodontics has placed too many barriers in front of the patient. Orthodontists should be embracing change, not fearing it. There is a distinct opportunity to take advantage of the growing interest in orthodontics. We need to understand that patients want options other than the traditional, invasive, and lengthy treatments plans and we must have the tools to provide for those options.

Our group only uses Pitts Protocols and the Pitts21 brackets because they allow us to conveniently, effectively and quickly treat all types of malocclusions ranging from simple to complex with brackets and elastics. And they usually avoid the need for extractions, surgery, excessive numbers of appointments, huge initial costs from lab fees, etc. It is the unique way in which we handle these devices that make the system so effective and not reliant on many additional appliances that take up resources and time. Fewer appointments, shorter treatment times, fewer uncomfortable and unnecessary fixed appliances, lower initial costs without the need to cover a lab fee, and greater scope of treatment we can perform without extractions or surgery are just a few of the barriers we are able to limit or eliminate for our patients.

I gravitated towards the passive self-ligating camp years ago because of the gorgeous smiles I saw being created efficiently, quickly, and most important for our group today, consistently. I decided back then that I wanted to learn how to create these kinds of smiles, and I knew that patients would be able to tell the difference and seek out these kinds of esthetic results. I also knew that doing it efficiently was not just good for the practice but, more important, good for the patient. To this day we continue to create WOW worthy smiles efficiently, and even branded our business Wow! Smiles. We

have found that delivering optimal esthetics efficiently has a high value universally and allows us to thrive in even the most competitive environments.

We cannot compete with large corporate marketing budgets, but we can compete by keeping our promises. This is where we need to focus and use the tools that allow us to do this routinely and accurately. If we promise WOW smiles then that is exactly what we need to focus on, and deliver. Delivering on the promises we make to our patients is the only magic bullet I have seen to success in any orthodontic practice.

Naming our business Wow! Smiles is a bold statement and lofty goal. Fortuitously, I chose my mentor well in Dr. Tom Pitts, who is also one of the best esthetic orthodontists of our time. When I started my practice from scratch, I visited Reno to learn about the ins and outs of private practice from Dr. Pitts. What I discovered was a treasure trove of applicable clinical pearls to create gorgeous smiles efficiently and consistently. After many years of learning from Dr. Pitts, we continue to work together to ensure that my group of orthodontists are kept up to date and continue to deliver the WOW smiles that we promise our patients. We are truly honored and privileged to be the only large orthodontic group that Dr. Pitts personally visits and works with regularly to ensure that we are delivering on our promise of creating WOW smiles.

In addition, using Pitts Protocols and Pitts21 brackets has done wonders for our practice operations. It makes training new employees a breeze, thereby placing less strain on our HR systems. The easier it is to on-board new team members the more accountable we can hold them and reduce HR issues. Consistently keeping our promises, by delivering WOW smiles in or under prescribed treatment time, has been a huge boon to our internal marketing and has reduced our reliance on PCD referrals. Initial alignment is occurring much quicker than with previous self ligation systems and occlusions are being corrected faster with the help of disarticulation and immediate light elastic sequencing. There is no better stress reducer in an orthodontists daily work flow than being able to tell patients and parents that they are ahead of schedule in their treatment. Being able to finish treatment on time or ahead of schedule not only creates raving fans but also unburdens your schedule, which reduces the workload on your administrative team by allowing more consistent scheduling and reducing total phone calls. Reducing treatment time brings down your overall active patient load and makes more room in your schedule to help more people!

Don't settle for mediocrity. Swim in a different sea and allow your practice to thrive by creating **WOW Smiles!**

Clockwise from Top Left: Dr. Rael Bernstein (Chief Clinical Officer), Nancy Perez (Director of Operations), Lexi Oliveira (Clinical Training Manager), Dr. David Majeroni (Former Associate), Dr. Tom Pitts (the Man, the Myth, the LEGEND!!!), Zachary Hemmer (Business Manager), Dr. Tim Auger (South Bay), Dr. Niya Mehta (North Bay), Dr. Sara Adabi (East Bay), Dr. Janette Yhip (South Bay)

CLEAR21™

orthodontics
Finish with the Best

GET EXCITED FOR A **CLEAR ADVANTAGE** IN SELF-LIGATING!

The **Clear21** aesthetic bracket is the newest addition to the **Pitts21** family!

AESTHETICS PATIENTS WANT, PREDICTABILITY DOCTORS DESERVE

FINALLY, AN AESTHETIC BRACKET

- Designed for speed and superior control
- Built to deliver exceptional finishes
- Conceived to use less force with greater control, comfort & slide mechanics

CLEAR21™

orthodontics
Finish with the Best

Finally an Aesthetic Bracket Designed for Speed & Superior Control.

The **Clear21** aesthetic self-ligating bracket is the newest addition to the Pitts21 family. Created using the hugely successful **.021 square slot** dimension, you now have an aesthetic option to go with your speed and superior control.

BIDIRECTIONAL HOOK
Centered bidirectional hook on upper 3's for comfort and security of auxiliaries.

PATIENT FRIENDLY CONTOUR
Designed for patient comfort.

COLOR CODED ALIGNMENT GUIDES
On the horizontal and long axis for storage and handling, while easily removed by first brush.

QUALITY AESTHETIC MATERIAL
Aesthetic and durable ceramic construction.

PRECISION SLOT
The precise .021 archwire slot aims to provide tighter pairing between the wire and the bracket leading to earlier, precise 3D control for torque, tip, and rotation.

UNIQUE DOOR DESIGN
The unique sliding door aims to provide enhanced control of rotation, torque, and structural stability.

EFFECTIVE UNDER TIE-WING AREA
Supports early elastics and power chain.

CLEAR21™

THE CLEAR ADVANTAGE

THE PROTOCOL™

orthodontics

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