Introduction
In the current marketplace, orthodontists are no longer just competing for potential patients with other orthodontists, but also, numerous dentists who have been coached by dental practice management experts to avoid referrals of patients from their offices. In such a competitive landscape, orthodontists can no longer afford to provide their patients with inefficient orthodontic treatment that often takes two to three years, with monthly visits to “tighten” the braces as perceived by the patients. As experts in the field, we need to arm ourselves with treatment tools that allow for efficient and effective orthodontic treatment means to obtain the desired treatment results, in a shorter period of time, with fewer adjustment appointments. The following case report demonstrates combining the SmartClip™ Self-Ligating Appliance, with the use of a soft-tissue laser to provide effective and efficient treatment in an adolescent patient.

Diagnosis and Treatment Plan
A 13-year-old female presented with the chief complaint of “eye teeth have not come in.” Clinical examination revealed Class I malocclusion with impacting and blocked out maxillary right and left canine teeth, an increased overbite, and mild maxillary and mandibular tooth-size-arch-length discrepancy (Figure 1A-J). A large midline maxillary diastema was present, with a heavy frenum. Cephalometric analysis revealed well-balanced skeletal relationship with retroclined maxillary and mandibular incisor teeth. Comprehensive orthodontic treatment using fixed appliances was presented. In order to allow for efficient treatment progression, it was advised to use a soft tissue laser to expose the maxillary right and left canine teeth, as well as to remove the frenum to avoid future recurrence of the maxillary diastema.
Treatment Progress

Fixed appliances (.022×.028 SmartClip™ Self-Ligating brackets) were bonded and leveling and aligning was initiated. To assist with the improvement of the inclination of the maxillary and mandibular incisors, Variable Prescription Orthodontic (VPO) high-torque prescription was used in this specific case. The passive self-ligating appliances offered the advantage of reduced friction which often occurs during guided eruption of high canine teeth when ligated brackets are used. An initial aligning wire of .014 SE Nitinol was used immediately after initial bonding, and upon return of the patient for the first adjustment appointment, a combination of .014/.016 SE Nitinol Tandem wires were used. Open coil springs were placed to increase the space for the eruption of the maxillary canines, and a light chain module was used to reduce the size of the diastema (Figure 2). Once sufficient space was created for the eruption of the canine teeth, the tips of these teeth erupted into the oral cavity (Figure 3). In order to improve treatment efficiency and allow for ideal bracket placement, a soft-tissue laser was used to expose adequate clinical crown space, and the maxillary canine brackets were placed with ideal bracket positioning. Tandem wire mechanics were used to guide the canine teeth into the arch. The .014 SE Nitinol wire was used to engage the canine brackets, while the .016 SE Nitinol wire was used in conjunction with passive Nitinol open coil springs to maintain the spaces for the eruption of the canines (Figure 4A-C).
As the canine teeth moved further into the arch, both tandem wires were engaged in the canine brackets for final leveling and alignment (Figure 5A-C). Wires were sequenced next to .019×.025 Heat-Activated Nitinol wires, before a mid-treatment panorex was taken to assess root position. Occlusion was detailed with the final working wires of .019×.025 Beta Titanium, and intermaxillary elastics. A fixed mandibular retainer was placed prior to the debond appointment, and removal of the maxillary frenum was achieved using a soft-tissue laser.

**Treatment Results and Conclusions**

The patient was seen for a total of 10 appointments during the 14.5-month active treatment period. Post treatment records revealed a Class I molar relationship with ideal overjet and overbite (Figure 6A-J). It was recommended to have the gingival margins of the maxillary incisors assessed one year after removal of the appliances for a possible gingival contouring to obtain optimal smile esthetics. However, at a subsequent retainer check appointment, the gingival inflammation had subsided and a gingivectomy was not deemed necessary (Figure 7A-H). Cephalometric superimposition indicated improved incisor inclination of the maxillary and mandibular incisor teeth. The use of VPO high-torque prescription allowed us to achieve this treatment goal in a relatively short treatment time, as the increased torque value accounts for the “slop” in the system and the loss of torque during routine orthodontic treatment as we rarely finish in a full-size .021×.025 wire (Figure 8). The increased torque value of the brackets utilized allowed us to finish with our .019×.025 wire, while obtaining the desired treatment torque values without the need for additional detailing bends and resulting increased treatment time.

In today’s competitive orthodontic landscape, patients want speedy treatment options. However, we should not provide expedient treatment in exchange for a reduction of treatment quality. Instead, we should aim to utilize the tools that allow for esthetic and functional treatment results, in an effective and efficient manner. This case is an example of using the SmartClip™ Self-Ligating appliance, combined with Variable Prescription Orthodontics and soft-tissue lasers to provide the patient with a smile that will last a lifetime.
Case photos provided by Dr. Moe Razavi.