After completing this course, the participant will have:
1. An understanding of whether the postpubertal stages of the cervical vertebral maturation method should be expected to be present in adult patients.
2. An appreciation for how orthodontic latex elastic forces degrade over 48 hours.
3. Knowledge concerning the effects of tooth angulation and force direction when moving palatally impacted canines.
4. An awareness of any differences in smile outcome when comparing patient treatments using either Invisalign or fixed appliances.

Article 1: Cervical vertebral maturation: Are postpubertal stages attained in all subjects? by Giuseppe Perinetti et al

1. The aim of this study was to determine whether postpubertal cervical vertebral maturation (CVM) stages 5 or 6 were attained in all subjects.
   True
   False

2. Each subject’s lateral cephalogram had the analyzed cervical vertebrae traced by 1 operator and checked for accuracy by a second investigator.
   True
   False

3. The authors concluded that the CVM parameters are highly correlated with the sex and age of the patient.
   True
   False

4. The authors recommended that planning treatment timing based only on CVM appears to be fully reliable.
   True
   False

Article 2: Force degradation of orthodontic latex elastics analyzed in vivo and in vitro, by Liu Yang et al

5. The objective of this study was to evaluate the characteristics of force degradation for 10 kinds of latex elastics over 48 hours in vivo.
   True
   False

6. The elastic tensile strength readings were recorded in ounces of force with a duration of 10 seconds for each elastic.
   True
   False

7. The authors reported that the larger the inner diameter and the smaller the setting force value, the slower the force decay was.
   True
   False

8. The authors concluded that the force degradation of the latex was greater in vivo than in air or artificial saliva.
   True
   False
Article 3: Effect of force direction and tooth angulation during traction of palatally impacted canines: A finite element analysis, by Kinan G. Zeng et al

9. The objective of this research was to determine the stresses on palatally impacted canines when subjected to initial force activation in various directions (buccal, vertical, and distal) and relative to impaction severity.
   True  False

10. The sample comprised 21 palatally impacted canines.
    True  False

11. The authors reported that the higher stresses generated by the buccal force at the cervical level with the more severely inclined canines indicated more resistance to movement.
    True  False

12. The authors concluded that the distal, buccal, and vertical force directions demonstrated similar levels of stress on the roots of the impacted canines.
    True  False

Article 4: Smile outcome comparison of Invisalign and traditional fixed-appliance treatment: A case-control study, by Terpsithea Christou et al

13. The purpose of this study was to evaluate and compare smile treatment outcomes among patients treated with several commercially available clear aligner products.
    True  False

14. The study used 15 variables (12 continuous and 3 categorical) to assess smile outcome of the 536 subjects who were evaluated.
    True  False

15. The authors reported that neither of the 2 treatment modalities had any significant effect on the lips at rest or on smiling.
    True  False

16. The authors concluded that orthodontic treatment with fixed appliances in patients with Class I nonextraction produced no greater changes in the patient’s smile than Invisalign treatment.
    True  False