After completing this course, the participant will have:
1. A familiarity with the influence from different magnitudes of intrusive force on the pulpal blood flow in maxillary molars.
2. An awareness of the effect on the properties of nickel-titanium springs after 6 months of clinical use.
3. A knowledge of what the literature presents about the potential for reduction of incisal trauma by early orthodontic intervention.
4. An appreciation for the effects and efficiency of self-ligating vs conventional brackets.

**Article 1: Effects of magnitude of intrusive force on pulpal blood flow in maxillary molars**, by Seyda Ersahan and Fidan A. Sabuncuoglu

1. The aim of this study was to evaluate and compare blood-flow changes in the pulp tissues of maxillary molars over a 6-week period after orthodontic intrusion using different magnitudes of force.
   1. True
   2. False

2. In the sample population with one overerupted maxillary first molar, a heavy (250g) intrusive force was placed on the overerupted molar and a light (150g) intrusive force was placed on the contralateral first molar.
   1. True
   2. False

3. The authors reported that no significant reduction in maxillary first molar pulpal blood flow appears to occur during the early stages of intrusion with either the light or the heavy force.
   1. True
   2. False

4. The authors concluded that forces as great as 250g can provide molar intrusion with no serious vascular consequences.
   1. True
   2. False

**Article 2: Effect of clinical use of nickel-titanium springs**, by Amanda Fahning Magno et al

5. The objectives of this study were to determine whether there are changes on the load deflection rate and the average force of the superelastic pseudoplateau, and whether permanent deformation is changed in nickel-titanium closed-coil springs after 6 months of clinical use.
   1. True
   2. False

6. Of the 50 nickel-titanium closed-coil springs used clinically for canine retraction, only 22 were selected for a second test.
   1. True
   2. False

7. The authors reported that the superelastic force pseudoplateau decreased by only 12%, and permanent deformation did not occur.
   1. True
   2. False

8. The authors concluded that after 6 months of clinical use, the nickel-titanium closed-coil springs showed little change in their properties.
   1. True
   2. False
Article 3: Early orthodontic treatment for Class II malocclusion reduces the chance of incisal trauma: Results of a Cochrane systematic review, by Badri Thiruvenkatachari et al

9. The intention of this systematic review is to summarize the most clinically relevant findings of the recently updated Cochrane systematic review pertaining to the treatment of Class II Division 2 malocclusion.
1. True
2. False

10. The authors included studies which were randomized controlled trials regarding children and adolescents receiving orthodontic treatment to correct prominent maxillary front teeth.
1. True
2. False

11. The authors reported that the literature supported the efficacy of 2-phase treatment over 1-phase treatment in adolescents.
1. True
2. False

12. The authors concluded that no difference was apparent in the incidence of incisal trauma when comparing early treatment to later 1-phase adolescent treatment.
1. True
2. False

Article 4: Retrospective investigation of the effects and efficiency of self-ligating and conventional brackets, by Megha Anand et al

13. The primary purpose of this retrospective cohort study was to assess the effects and efficiency of self-ligating brackets compared with conventional brackets.
1. True
2. False

14. The subjects for this study were selected from two private practices, one treating patients with self-ligating brackets and the other treating patients with conventional brackets.
1. True
2. False

15. The authors reported that in this investigation self-ligating brackets were associated with increased arch length and width.
1. True
2. False

16. The authors concluded that the bracket system per se has a major effect on arch dimensions, mandibular incisor inclination, occlusal outcomes, and treatment efficiency.
1. True
2. False