After completing this course, the participant will have:
1. A knowledge about the long-term stability differences between initiating palatal expansion in the mixed dentition or the permanent dentition.
2. A familiarity with the use of the acrylic Herbst appliance supported with either elastic chain or metal ligature attached to a miniscrew when treating a Class II malocclusion.
3. An awareness of the differences between lingual or buccal orthodontic techniques for the creation of adverse effects in patients.
4. An appreciation for the differences between therapeutic techniques used for the remineralization of white spot lesions after orthodontic treatment.

**Article 1: Long-term stability of rapid palatal expansion in the mixed dentition vs the permanent dentition, by Colleen N. Mohan et al**

1. The purpose of this study was to determine the long-term stability of palatal expansion performed in the mixed dentition vs the permanent dentition.
   1. True
   2. False

2. The 54 subject subjects were divided into a mixed dentition group with crossbite and a permanent dentition group with crossbite.
   1. True
   2. False

3. The authors concluded that long-term intermolar width stability was significantly better for the mixed dentition expansion vs the permanent dentition expansion.
   1. True
   2. False

4. The authors concluded that patients who started with no crossbite had greater stability of the intermolar width expansion than did patients who started with a crossbite.
   1. True
   2. False

**Article 2: Herbst appliance anchored to miniscrews with 2 types of ligation: Effectiveness in skeletal Class II treatment, by Antonio Manni et al**

5. The aim of this study was to evaluate the effectiveness of the treatment of skeletal Class II malocclusions with a fixed banded Herbst appliance anchored to miniscrews with 2 types of ligation.
   1. True
   2. False

6. The sample comprised 3 groups of 20 subjects each, who had pretreatment bilateral Angle Class II Division 1 malocclusion.
   1. True
   2. False

7. The authors reported that skeletal anchorage with miniscrews reduces incisor flaring when using an acrylic Herbst appliance.
   1. True
   2. False

8. The authors concluded that an acrylic Herbst appliance ligated with either elastic chain or metal ligatures was equally effective in producing skeletal changes.
   1. True
   2. False
Article 3: Adverse effects of lingual and buccal orthodontic techniques: A systematic review and meta-analysis, by Fadi Ata-Ali et al

9. The aim of this systematic review was to assess the prevalence of adverse effects associated with lingual and buccal fixed orthodontic techniques.
   1. True
   2. False

10. Nine articles met the criteria and were included in the systematic review.
   1. True
   2. False

11. The authors reported on the systematic review of the literature, which suggests that lingual appliances cause more pain, speech difficulties, and problems with proper oral hygiene than do buccal appliances.
   1. True
   2. False

12. The authors recommended that the strong evidence in the literature for the differences in adverse effects between lingual and buccal appliances precludes the need for further research in this area.
   1. True
   2. False

Article 4: Comparative assessment of fluoride varnish and fluoride film for remineralization of postorthodontic white spot lesions in adolescents and adults over a 6-month period: A single-center, randomized controlled clinical trial, by Tao He et al

13. The objective of this 3-arm parallel randomized trial was to evaluate the effects of a fluoride varnish and a fluoride film on the remineralization of white spot lesions around orthodontic brackets after orthodontic treatment.
   1. True
   2. False

14. The test groups received fluoride varnish or film treatment once a month for 6 months, and the control group received a placebo treatment each month.
   1. True
   2. False

15. The authors reported no difference in white spot lesion remineralization between fluoride varnish and fluoride film.
   1. True
   2. False

16. The authors concluded that the fluoride varnish or film induced a greater amount of remineralization than did just the daily use of fluoride toothpaste.
   1. True
   2. False