After completing this course, the participant will have:
1. Knowledge about the short- and long-term effects of early Class III therapies.
2. An appreciation for the marginal bone levels around the mandibular incisors after 10 years of bonded retainer wear.
3. An awareness of the impact of piezocision on the potential for root resorption associated with orthodontic tooth movement.
4. A familiarity with the incidence of failures and posttreatment instability when comparing the direct and indirect methods of bonding lingual retainers.

**Article 1: Early orthodontic treatment for Class III malocclusion: A systematic review and meta-analysis, by Badri Thiruvenkatachari et al**

1. The aim of this systematic review was to evaluate the effectiveness of orthodontic/orthopedic methods used in the early treatment of Class III malocclusion in the short and long terms.
   - True
   - False
2. The criteria for the types of studies in this systematic review included randomized controlled trials, retrospective cohort studies, and prospective controlled clinical trials.
   - True
   - False
3. The authors reported a high level of quality evidence available in the literature, with most studies having a low risk of bias.
   - True
   - False
4. In the conclusions, the authors stated that moderate evidence is available to show that early treatment with a facemask results in positive improvements in both skeletal and dental changes in the short term. However, there is a lack of evidence for the long-term benefits.
   - True
   - False

**Article 2: Cone-beam computed tomographic evaluation of the long-term effects of orthodontic retainers on marginal bone levels, by Anna Westerlund et al**

5. The aim of this study was to evaluate whether bonded or removable orthodontic retainers have a greater adverse long-term effect on the marginal bone levels of the mandibular front teeth.
   - True
   - False
6. The sample comprised 62 orthodontic patients 10 years after treatment; 31 had bonded mandibular lingual retainers, and 31 had removable Hawley retainers.
   - True
   - False
7. The authors reported no difference in the marginal bone levels on the buccal side of the mandibular incisors between the 10-year retainer group and the no-retainer group.
   - True
   - False
8. The authors concluded that long-term retention in general does not seem to cause any adverse effects on the marginal bone level 10 years after treatment.
   - True
   - False
Article 3: Effect of piezocision on root resorption associated with orthodontic force: A microcomputed tomography study, by Braydon M. Patterson et al

9. The purpose of this study was to investigate the effect of piezocision on orthodontically induced root resorption.
True
False
10. The sample comprised 14 patients; 1 side was assigned to the piezocision procedure, and the other side served as the control.
True
False
11. The authors concluded that the piezocision procedure that initiates the regional acceleratory phenomenon does not increase root resorption when used in conjunction with orthodontic forces.
True
False
12. The authors recommended that the use of piezocision as a standard procedure should be reconsidered and closely evaluated during comprehensive treatment.
True
False

Article 4: Indirect vs direct bonding of mandibular fixed retainers in orthodontic patients: Comparison of retainer failures and posttreatment stability. A 2-year follow-up of a single-center randomized controlled trial, by Fabienne Egli et al

13. The objectives of this 2-arm parallel trial were to compare the number of failures of mandibular fixed retainers bonded with indirect and direct methods and to investigate the posttreatment changes 5 years after placement.
True
False
14. The eligibility criteria for the 64 retention patients consisted of the following: the presence of the 4 mandibular incisors and the 2 mandibular canines; no other factors were considered.
True
False
15. The authors reported that lingual retainers bonded with either indirect or direct methods are effective in maintaining intercanine and inter premolar distances.
True
False
16. The authors concluded that the indirect bonding method for lingual retainers had fewer failures 2 years after bonding than did retainers bonded directly.
True
False