

# CONTINUING EDUCATION

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## Learning Objectives

After completion of this exercise, the participant will be able to:

1. Describe the use of the root-visualization tool in Spark Aligner Approver software.
2. Discuss an approach to skeletal Class III correction involving a first phase of orthopedic treatment and a second phase of clear aligner therapy.
3. Compare a Mesialslider to other methods of treating patients who present with missing upper lateral incisors.
4. Contrast the effects of various forms of the Herbst appliance in achieving mandibular advancement for late adolescents.

## Article 1

Pinter, C.: *Improved Biomechanical Control with Spark Aligner Approver Root-Visualization Software* (pp. 466-473)

1. The accuracy of upper-incisor extrusion with clear aligners can be enhanced by creating a “relative” extrusion, which involves:
  - a) a combination of extrusion with tipping
  - b) a combination of extrusion with torque
  - c) a combination of both resultant and absolute extrusion
  - d) extrusion in a purely vertical plane
2. With Spark Aligner Approver software’s TruRoot feature, if a cone-beam computed tomography scan is not available:
  - a) a digital intraoral scan can be used
  - b) a lateral cephalogram can be used
  - c) a computer simulation of the dental roots can be used

- d) any of the above
3. If absolute extrusion is required, the clinician is advised to add:
    - a) gingival beveled horizontal attachments
    - b) a functional appliance
    - c) skeletal anchorage
    - d) pulling mechanics
  4. If non-tracking of the aligners is observed:
    - a) skeletal anchorage should be added
    - b) the corresponding horizontal attachment should be removed
    - c) any elastic wear should be discontinued
    - d) the aligners should be discontinued

## Article 2

Palone, M.; Guiducci, D.; Albertini, P.; Cremonini, F.; and Lombardo, L.: *Class III Treatment with Skeletal Alternating Rapid Maxillary Expansion and Constriction Protocol and Facemask Followed by Clear Aligners* (pp. 474-488)

5. The most common early orthopedic treatment in skeletal Class III cases involves the combined use of a facemask and:
  - a) a transpalatal arch
  - b) a rapid palatal expander
  - c) a chin cup
  - d) clear aligners
6. In the SKAR III approach, the expansion appliance is anchored by:
  - a) a nickel titanium archwire
  - b) clear aligners
  - c) two infrazygomatic miniscrews
  - d) two palatal miniscrews
7. The alternating rapid maxillary expansion and

constriction protocol has been shown to produce greater maxillary protraction than conventional expansion techniques because it:

- a) more effectively disarticulates the circum-maxillary sutures
- b) can be implemented at an earlier stage of development
- c) involves more daily turns of the jackscrew
- d) involves skeletal anchorage

8. Clear aligners could be used for this patient's Phase II dentoalveolar compensation because:

- a) they have been shown to control the vertical dimension in open-bite treatment
- b) her skeletal Class III correction had been achieved in Phase I
- c) she was near the end of her growth spurt
- d) all of the above

**Article 3**

Campoy Ferrer, M.D.; Northway, W.; and Wilmes, B.: *Mesialslider for Treatment of Congenitally Missing Upper Lateral Incisors* (pp. 489-497)

9. Congenitally absent upper lateral incisors have a reported general prevalence of:

- a) .01-.5%
- b) .8-2%
- c) 5-8%
- d) 18-20%

10. The Mesialslider supports mesialization of the upper posterior teeth with:

- a) indirect anchorage from two palatal mini-implants
- b) indirect anchorage from two retromolar mini-implants
- c) direct anchorage from two palatal mini-implants
- d) direct anchorage from two retromolar mini-implants

11. An average of about 6mm of mesialization can be achieved using the Mesialslider with:

- a) closed-coil springs
- b) elastomeric chains
- c) intramaxillary elastics

d) nickel titanium archwires

12. Closure of missing lateral-incisor spaces may be preferable to space opening for subsequent prosthodontic replacement in patients with more visible upper anterior teeth because it:

- a) does not cause anterior torque loss
- b) can be completed before skeletal maturity
- c) does not require canine guidance
- d) all of the above

**Article 4**

Manni, A.; Boggio, A.; Caldara, G.; Gastaldi, G.; and Cozzani, M.: *Herbst Appliance with Four-Miniscrew Anchorage for Mandibular Advancement after the Pubertal Peak* (pp. 505-513)

13. Skeletal and dental effects of the Herbst appliance include:

- a) protraction of the mandible
- b) reduction of maxillary sagittal growth
- c) distalization of the maxillary arch
- d) all of the above

14. The lower portion of the authors' Herbst appliance consists of:

- a) a fixed lingual arch
- b) a rod-and-tube assembly
- c) an acrylic splint
- d) a tongue crib

15. The STM4 technique stands for:

- a) Skeletal Therapy Manni Telescopic Herbst 4 TADs
- b) Skeletal Therapy Manni Telescopic Herbst 4 Months
- c) Standard Telescopic Manni Herbst Appliance Version 4
- d) Standard Telescopic Main Herbst Appliance 4 TADs

16. The ideal skeletal-maturation stage to achieve skeletal effects with a Class II appliance is:

- a) CS1
- b) between CS2 and CS3
- c) between CS3 and CS4
- d) CS5 or later