

# CONTINUING EDUCATION

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## Learning Objectives

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

1. Discuss the application of clear aligners in pre-surgical orthodontic treatment.
2. Compare the clinical performance of LightForce custom brackets with that of conventional brackets.
3. Describe a boneborne rapid maxillary expander (RME) that can be planned and inserted at the same appointment.
4. Evaluate the effects of bleaching before Icon infiltration on the color of enamel with white-spot lesions.

## Article 1

Meuli, S.; Brugnami, F.; Marrocco, S.; Orsini, R.; and Scopelliti, D.: *Invisalign Treatment with Periodontally Accelerated Osteogenic Orthodontics and Orthognathic Surgery* (pp. 264-273)

1. Periodontally accelerated osteogenic orthodontics is also known as:
  - a) guided bone regeneration
  - b) regional acceleratory orthodontics
  - c) regenerative corticotomy
  - d) bilateral sagittal osteotomy
2. In the authors' protocol, the periodontal surgery is performed:
  - a) before clear aligner treatment
  - b) between two and four weeks into clear aligner treatment
  - c) after the clear aligner phase
  - d) after orthognathic surgery
3. The intraoperative splint is designed using:
  - a) OrthoCad software

- b) ClinCheck
  - c) cone-beam computed tomography
  - d) a physical model setup
4. In the postsurgical phase, aligners are changed every:
    - a) two days
    - b) five to seven days
    - c) 10 days
    - d) two weeks

## Article 2

Waldman, A.; Garvan, C.S.; Yang, J.; and Wheeler, T.T.: *Clinical Efficiency of LightForce 3D-Printed Custom Brackets* (pp. 274-282)

5. LightForce brackets are three-dimensionally printed from:
  - a) stainless steel
  - b) photopolymeric resin
  - c) polycrystalline alumina
  - d) monocrystalline aluminum oxide
6. In this clinical study, the LightForce treatment group did not differ significantly from the conventional-bracket group in terms of:
  - a) initial Peer Assessment Rating
  - b) percentage of extraction cases
  - c) Angle classification
  - d) all of the above
7. Compared to the conventional-bracket group, the average treatment time for the LightForce group was:
  - a) 45% shorter
  - b) 34% shorter
  - c) essentially the same
  - d) 31% longer

8. Nickel titanium wires were used as the final upper archwires in:

- a) 31% of the conventional-bracket group
- b) 45% of the conventional-bracket group
- c) 65% of the LightForce group
- d) 78% of the LightForce group

**Article 3**

Alev, Y.: *An Effective and Precise Method of Boneborne Maxillary Expansion* (pp. 291-297)

9. A conventional RME tends to cause alveolar bone bending and dental tipping because it:

- a) transmits expansion forces through the teeth
- b) is anchored to the molars
- c) is used in growing patients
- d) all of the above

10. To allow perpendicular insertion of the mini-screws into the palatal cortical bone, the UxL Expander must be positioned:

- a) distal to the third palatal rugae
- b) between the palatal and the nasal cortical borders
- c) parallel to the palatal curvature
- d) perpendicular to the midpalatal suture

11. The appropriate miniscrew length is selected as a result of:

- a) measuring the patient's palatal width
- b) predrilling through the guide tubes
- c) fitting on the setup model
- d) radiographic evaluation

12. Placement of the UxL Expander deep in the palatal vault:

- a) maximizes skeletal expansion
- b) minimizes dentoalveolar bending
- c) produces relatively parallel expansion
- d) all of the above

**Article 4**

El Tanany, R.; Nassif, M.S.; and El-Korashy, D.I.: *Effects of Icon Treatment and Bleaching on the Color of Enamel with Induced White-Spot Lesions* (pp. 298-305)

13. White-spot lesions can be caused by any of the following except:

- a) premature application of orthodontic force
- b) poor oral hygiene
- c) microbial adhesion
- d) biofilm formation

14. In the color system developed by the Commission Internationale de l'Éclairage, the a\* value represents the:

- a) lightness coordinate
- b) chromaticity coordinates of green-red
- c) chromaticity coordinates of blue-yellow
- d) chromaticity coordinates of violet-orange

15. In the authors' study, the only subgroup to resist the acid challenge was treated with:

- a) Icon infiltration only
- b) bleaching only
- c) bleaching followed by Icon infiltration
- d) no bleaching or infiltration

16. Acid etching is required before Icon infiltration because:

- a) it removes water from inside the micro-porosities of the white-spot lesion
- b) it camouflages the white-spot lesion
- c) it fills the space created by polymerization shrinkage
- d) the pseudo-intact surface of a white-spot lesion is not porous enough to allow full resin penetration