

# CONTINUING EDUCATION

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## Learning Objectives

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

1. Combine the Invisalign mandibular advancement feature with photobiomodulation (PBM) in treatment of adult skeletal Class II patients.
2. Describe a method of maxillary space closure using aligners and palatal mini-implant anchorage for use in patients with congenitally missing lateral incisors.
3. Discuss the use of clear aligner therapy in patients with transposed upper canines and lateral incisors.
4. List the advantages and disadvantages of combining clear aligner therapy with orthognathic surgery.

## Article 1

El-Bialy, T.: *Mandibular Advancement in Adult Skeletal Class II Patients Using Clear Aligners and Photobiomodulation* (pp. 11-19)

1. PBM can make it possible for patients to change aligners as often as:
  - a) once a day
  - b) every three days
  - b) once a week
  - c) every two weeks
2. In the case shown here, initial preparation for using the Invisalign mandibular advancement feature involved:
  - a) upper arch expansion
  - b) upper incisor proclination
  - c) leveling of the lower curve of Spee
  - d) all of the above

3. Labial crown torque of the upper incisors is essential in skeletal Class II treatment to:
  - a) allow forward mandibular positioning and projection
  - b) decompensate for the patient's lower incisor retroclination
  - c) avoid proclination from the Class II mechanics being used
  - d) all of the above
4. In an adult patient, any mandibular autorotation is likely to result from:
  - a) latent growth
  - b) remodeling of the condyles
  - c) intrusion of the posterior teeth
  - d) proclination of the incisors

## Article 2

Wilmes, B.; Schwarze, J.; Vasudavan, S.; and Drescher, D.: *Maxillary Space Closure Using Aligners and Palatal Mini-Implants in Patients with Congenitally Missing Lateral Incisors* (pp. 20-33)

5. In a case involving congenitally missing upper lateral incisors, maxillary space closure is preferable to space opening and subsequent prosthetic replacement if the patient presents with:
  - a) a Class III malocclusion
  - b) an open bite
  - c) vertical maxillary excess
  - d) lower crowding
6. When miniscrews are placed in the anterior palate, a median insertion has the advantage of:
  - a) greater bone quantity
  - b) less risk of incisor root injury during insertion

- c) keeping the miniscrews away from the incisive canals
  - d) both a and b
7. The B-Mesialslider differs from the conventional Mesialslider and T-Mesialslider in that it:
- a) is attached only to the molars
  - b) is connected to the premolars through bonded tubes
  - c) allows the use of sliding mechanics
  - d) enables mesialization or protraction of the upper molars
8. If mesialization is performed simultaneously with clear aligner therapy:
- a) all tooth movement is controlled only by the aligners
  - b) sequential mesialization will be required
  - c) any rotation or tipping of the teeth connected to the slider cannot be programmed into the ClinCheck
  - d) a refinement stage will not be required

**Article 3**

Giancotti, A.; Conigliaro, A.; and Mampieri, G.: *Aligner Treatment of Transposed Maxillary Canines and Lateral Incisors* (pp. 34-43)

9. The most common type of transposition involves the:
- a) maxillary canine and lateral incisor
  - b) maxillary canine and first premolar
  - c) maxillary central and lateral incisors
  - d) mandibular canine and lateral incisor
10. Canine and lateral incisor transposition usually results from:
- a) dentofacial trauma in the deciduous dentition
  - b) migration of a tooth from its normal path of eruption
  - c) either early loss or prolonged retention of deciduous teeth
  - d) a genetic interchange in position of developing tooth buds during odontogenesis
11. Important considerations in planning orthodontic correction of transposed teeth include all of the following except:
- a) tooth morphology

- b) developmental stage and positions
  - c) reproducibility of the programmed treatment
  - d) duration of treatment
12. In the case shown here, the Class II relationship was corrected with:
- a) aligners alone
  - b) light auxiliary elastics
  - c) nickel titanium closed-coil springs
  - d) Class II elastics

**Article 4**

Lou, T. and Caminiti, M.: *Orthognathic Surgery Combined with Clear Aligner Therapy* (pp. 44-58)

13. In planning presurgical aligner treatment, it is important to communicate to the technician that:
- a) a decompensated occlusion must be created
  - b) a Class I occlusion must be achieved by using dentoalveolar compensation
  - c) the compensated occlusion must place the canines in a Class I relationship
  - d) the case will be set up similar to any other aligner case
14. To optimize the effectiveness of the surgery in presurgical aligner treatment, a Class III skeletal base requires:
- a) an increase in positive overjet
  - b) decompensatory mechanics to increase the negative overjet
  - c) proclination of the maxillary incisors
  - d) uprighting of the mandibular incisors
15. The authors' clear-aligner orthognathic splint:
- a) fits the full crowns of all teeth in both arches
  - b) should be clear enough to allow visual confirmation of cusp seating
  - c) fits much more tightly than a conventional surgical splint
  - d) all of the above
16. If bonded orthodontic brackets are used for temporary maxillomandibular fixation, they should be placed:
- a) at the cemento-enamel junctions
  - b) in their ideal facial positions
  - c) on the lingual side
  - d) at the facial axis points