CONTINUING EDUCATION

The East Carolina School of Dental Medicine will award 3 hours of Continuing Education credit for reading this issue of JCO and answering at least 12 of the following 16 questions correctly. Take this test online at www.jco-online.com (click on Continuing Education); payment of \$25 is required by VISA or MasterCard. The test may be retaken once if not passed on the first attempt. Correct answers will be supplied immediately, along with a printable certificate. Tests will be accessible on the JCO website for 12 months after publication. A subscription to JCO is not required to earn C.E. credits. For information, contact Dr. Neal Kravitz; e-mail: editor@jco-online.com. CER Code: JCO May 2025.

Learning Objectives

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

1. Discuss special considerations for the treatment of Class II subdivision malocclusion in patients who are missing multiple teeth.

2. Describe a protocol for a combination of sonosurgery with skeletally supported palatal expansion in adult patients.

3. Follow a digital workflow for in-house fabrication of bite bumpers and distalizers.

4. Compare a modified frog protocol using clear aligners to other methods of treating patients with deep bites.

Article 1

Blatt Ohira, E.T.; Blatt Ohira, G.O.; Borba, D.B.M.; Iwasaki, R.A.; Valarelli, F.P.; Cotrin, P.; and Fialho, T.: *Treatment of an Asymmetrical Class II Malocclusion in an Adult Patient with Multiple Missing Teeth* (pp. 297-305)

1. In a type 1 Class II subdivision malocclusion, the dental midline deviation is in:

- a) only the maxillary arch
- b) only the mandibular arch
- c) either arch
- d) both arches

2. Orthodontic camouflage treatment of an adult with a mild asymmetrical Class II malocclusion may involve any of the following except:

- a) fixed functional appliances
- b) skeletal anchorage
- c) slow palatal expansion
- d) headgear

- 3. The cherry loop is a modification of the: a) bull loop
 - b) T-loop
 - c) boot loop
 - d) omega loop

4. Sliding mechanics with cherry loops is an effective means of performing molar mesialization because it:

- a) simultaneously corrects any rotation
- b) minimizes anterior retraction
- c) moves first the crown and then the roots
- d) all of the above

Article 2

De Gabriele, O.; Tarraf, N.E.; and Wilmes, B.: Sonosurgery and a Skeletally Supported Expander for Minimally Invasive Maxillary Expansion in Adults (pp. 306-314)

5. Maxillary transverse deficiency has been associated with all of the following conditions except:

- a) mandibular prognathia
- b) maxillary retrognathia
- c) cleft lip and palate
- d) TMD

6. A rapid increase in ossification of the midpalatal suture tends to occur between the ages of:

- a) 10 and 13
- b) 13 and 16
- c) 18 and 25
- d) 20 and 36

7. The sonic instrument for bone surgery (SIBS) is powered by:

- a) compressed air
- b) electricity

c) an implant micromotor

d) a diode laser

8. Activation of the skeletally supported expander begins five days after surgery to:

a) ensure stability of the miniscrews

b) allow the capillaries to regrow across the areas of the osteotomies

c) ensure that the midpalatal suture has been opened sufficiently

d) allow the surgical sutures to be removed

Article 3

Yoo, S.W. and Bechtold, T.E.: *CAD/CAM Workflows for In-House Printing of Bite Bumpers and Distalizing Appliances* (pp. 316-322)

9. For three-dimensional printing of a digitally designed bite bumper, the authors' first choice is a:

- a) crown resin
- b) splint resin
- c) denture resin
- d) composite resin

10. The software used by the authors to design the hinge joints for a 3D-printed Carriere-like distalizer is:

- a) Appliance Designer
- b) OnyxCeph³
- c) Fusion 360
- d) Meshmixer

11. In designing a 3D-printed distalslider, a more distal placement of the molar band tubes on the attachments:

a) counteracts distal tipping of the first molars

b) reduces rotational moments exerted on the first molars

c) facilitates placement in the mouth

d) allows Class II elastics to be worn

12. Some of the advantages of in-house computeraided design and manufacturing of orthodontic appliances include:

a) the potential for customization

b) reduced cost

c) precision of biomechanics

d) all of the above

Article 4

Huanca Ghislanzoni, L.; Mourgues, T.; González-Olmo, M.J.; and Romero-Maroto, M.: *Modified Frog Protocol for Deep-Bite Management in Growing Patients* (pp. 326-334)

13. Using clear aligners to treat deep-bite cases can eliminate the need for:

- a) headgear
- b) fixed functional appliances
- c) bite turbos
- d) tongue spurs

14. The frog protocol is a method of deep-bite treatment that:

a) involves vertical intrusion and retraction of the lower anterior segment

b) alternates intrusion of the lower canines and lower incisors

c) expands the maxillary arch during posterior extrusion

d) uses incisor inclination to achieve a dental correction

15. Before beginning the intrusion phase with clear aligners, the authors create spaces of as much as 5mm by means of:

- a) labial crown inclination
- b) interproximal reduction
- c) molar distalization
- d) either a or b

16. Horizontal rectangular beveled occlusal attachments are placed on the lower canines and premolars to:

- a) use the lateral segments as anchorage
- b) improve aligner retention
- c) facilitate aligner insertion
- d) all of the above