

# 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](http://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](mailto:editor@jco-online.com). CER Code: JCO June 2025.*

---

## Learning Objectives

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

1. Describe a modified “surgery first” approach (SFA) for use with customized brackets in Class III treatment.
2. Compare the KLOwen system to other customized fixed appliances.
3. Prescribe a myofunctional device for relief of an atypical swallowing pattern.
4. Discuss the use of clear aligners in patients with upper midline deviations.

## Article 1

Gurralla, C.; Nedjat-Haiem, M.; Ibrar, A.; Zhang, Y.; and Uribe, F.A.: *A Modified “Surgery First” Approach and Customized Brackets for Treatment of Class III Malocclusion* (pp. 358-368)

1. The customized bracket system used by the authors is:
  - a) KLOwen
  - b) Insignia
  - c) LightForce
  - d) UBrackets
2. The authors modify the SFA by adding a short phase of:
  - a) presurgical orthodontics using custom fixed appliances
  - b) presurgical orthodontics using clear aligners
  - c) postsurgical orthodontics using headgear and a facial mask
  - d) postsurgical orthodontics using a fixed functional appliance
3. After orthognathic surgery, the virtually de-

signed splint is kept in place to maintain transverse stability for:

- a) two weeks
  - b) six weeks
  - c) three months
  - d) the remainder of treatment
4. Customized brackets may help shorten the duration of postsurgical orthodontic treatment because they:
    - a) adapt precisely to the labial contours of the teeth
    - b) provide accurate tip and torque
    - c) lessen the need for finishing bends
    - d) all of the above

## Article 2

Owen, B. and Kravitz, N.D.: *JCO Interviews Dr. Brandon Owen on Custom Labial Braces* (pp. 374-379)

5. The KLOwen system combines:
  - a) premanufactured brackets with customized composite bases
  - b) customized three-dimensionally printed brackets with customized composite bases
  - c) customized 3D-printed brackets with pre-manufactured bases
  - d) customized 3D-printed brackets with customized archwires
6. KLOwen brackets are available in:
  - a) six different shapes
  - b) 12 different shapes
  - c) 41 different shapes
  - d)  $6.1 \times 10^{21}$  different shapes
7. Dr. Owen finishes most KLOwen cases with:

- a) .019" × .025" nickel titanium archwires
- b) .018" × .018" nickel titanium archwires
- c) .017" × .025" TMA archwires
- d) .018" × .018" TMA archwires

8. In a preliminary multicenter, retrospective study, compared with traditional labial brackets, KLOwen brackets showed a:

- a) comparable treatment time
- b) 7.1% reduction in treatment time
- c) 10-month reduction in treatment time
- d) 31% reduction in treatment time

### Article 3

Romano, R. and Keren, L.: *Use of the Froggymouth Myofunctional Device to Relieve Atypical Swallowing in Patients with Anterior Open Bite* (pp. 380-388)

9. Relapse of an anterior open bite has been attributed to any of the following causes except:

- a) inadequate retention
- b) obstructive sleep apnea
- c) natural growth and development
- d) forces exerted by the facial and jaw muscles

10. An atypical swallowing pattern is properly understood as a:

- a) habit developed in adolescence
- b) tongue-thrust habit
- c) change in the tongue's resting posture
- d) precursor to ankyloglossia

11. The Froggymouth device should be used daily with the goal of:

- a) stimulating lip contraction
- b) building new neural circuits by targeting the subcortical pathway
- c) inducing a new swallowing pattern
- d) all of the above

12. Clear aligners have been found to correct open bites in adult patients primarily by means of:

- a) archform modification
- b) incisor extrusion and retroclination
- c) posterior intrusion
- d) relief of atypical swallowing

### Article 4

Greco, M.; Galassini, G.; Marcuzzi, E.; and Rombolà, A.: *Simultaneous Unilateral Upper and Lower Distalization with Temporary Anchorage Devices and Aligners* (pp. 395-405)

13. Laypeople can recognize upper midline deviations of as little as:

- a) 1mm
- b) 2-4mm
- c) 5mm
- d) 6-8mm

14. In the case shown here, the authors resolved a midline deviation by using temporary anchorage devices placed in the:

- a) paramedian region of the palate
- b) midline of the palate
- c) interradicular regions between the first molars and second premolars
- d) retromolar areas

15. The force for asymmetrical molar distalization was provided by:

- a) an upper molar distalizer
- b) a palatal expander
- c) Class III elastics
- d) both a and c

16. When clear aligners are used in cases such as this, care must be taken to avoid tracking problems caused by:

- a) anchorage loss
- b) imprecise placement of attachments
- c) the discrepancy between forces applied by the aligners and the distalizing appliance
- d) lack of patient cooperation with aligner wear