

# 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 \$30 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 August 2026.*

---

## Learning Objectives

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

1. Contrast orthodontists' and laypersons' esthetic perceptions of spacing between the upper central incisors.
2. Review key considerations in the treatment of patients with amelogenesis imperfecta (AI).
3. Discuss the use of clear aligners with integrated reverse twin blocks for treatment of pseudo-Class III malocclusion.
4. Describe current and potential uses of robotics in orthodontic practice.

## Article 1

Morrow WP, Rinchuse D, Zullo T. *Perception of anterior interdental spacing among laypersons* (pp. 504-509).

1. A maxillary median diastema is considered to be a space between the central incisors greater than:
  - a) .1mm
  - b) .5mm
  - c) 1mm
  - d) 1.5mm
2. Among the laypersons surveyed in this study, an open gingival embrasure was perceived as interdental spacing by:
  - a) 87%
  - b) 82%
  - c) 76%
  - d) 29%
3. A triangular incisor shape contributes to:
  - a) an open gingival embrasure

- b) an open incisal embrasure
  - c) a black triangle
  - d) both a and c
4. The study found a significant interaction between ethnicity and gender among:
    - a) Asian female respondents
    - b) Black female respondents
    - c) White male respondents
    - d) Asian male respondents

## Article 2

Noble J, Vandersluis-Solomon Y, Kravitz ND. *Orthodontic treatment in patients with amelogenesis imperfecta* (pp. 516-520).

5. AI is a genetically heterogeneous group of:
  - a) neurodegenerative conditions
  - b) myopathies
  - c) developmental disorders
  - d) cystic formations
6. AI is associated with clinical findings including any of the following except:
  - a) ankylosis
  - b) anterior open bite
  - c) congenitally missing teeth
  - d) taurodontism
7. To improve bracket bond strength on compromised enamel surfaces, the clinician can use:
  - a) a self-etching primer
  - b) an adhesion promoter
  - c) a nanocomposite resin
  - d) a bulk-fill resin
8. Restorative dentists typically prefer AI cases to be completed with:

- a) completely closed residual spaces
- b) fixed lingual retainers
- c) .5mm of anterior open bite
- d) all of the above

### Article 3

Wu T, Mei L. *Treatment of a pseudo-Class III malocclusion with clear aligners and reverse twin blocks* (pp. 521-528).

9. Pseudo-Class III malocclusion is characterized by a forward functional shift of the mandible resulting from:

- a) a Class III buccal segment relationship
- b) premature contact between the incisors
- c) excessive incisal wear
- d) increased incisor mobility

10. In the mixed dentition, a pseudo-Class III malocclusion can be corrected by any of the following modalities except:

- a) conventional removable appliances
- b) clear aligners
- c) Anterior Root Torque (ART) auxiliaries
- d) maxillary protraction facemasks

11. The effect of reverse twin blocks has been shown to be mainly:

- a) dentoalveolar
- b) skeletal
- c) dentofacial
- d) myofunctional

12. To prevent deformation of the reverse twin blocks from occlusal forces, the authors suggest:

- a) adding vertical attachments for the clear aligners

- b) cutting out the clear aligners in the areas of the twin blocks
- c) correcting the incisor relationship before placement of the twin blocks
- d) adding cold-cure acrylic or composite resin to reinforce the twin blocks

### Article 4

Lemchen M. *Robots are real—and they're here now: A clinician's perspective on emerging robotics in orthodontics* (pp. 530-538).

13. A practice robot's main function is to:

- a) provide treatment education
- b) converse with patients
- c) transport instrument trays and supplies
- d) escort patients from reception to the chair

14. A delivery robot's main function is to:

- a) provide treatment education
- b) converse with patients
- c) transport instrument trays and supplies
- d) escort patients from reception to the chair

15. Zeeno robots are powered by an artificial intelligence assistant named:

- a) Alexa
- b) Siri
- c) Gemini
- d) Stella

16. By the author's calculation, the payback period for a Zeeno patient escort function is:

- a) 4.7 months
- b) 12 months
- c) 17.6 months
- d) 24 months