



Ivoclar Vivadent, Inc.  
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### Description

**Variolink® Esthetic** is an adhesive resin cement for the permanent cementation of ceramic and resin composite restorations. **Variolink Esthetic** combines features of its predecessors, **Variolink® II** and **Variolink® Veneer**. It is available in light-cured (LC) and dual-cured (DC) versions. **Variolink Esthetic** contains the patented light initiator, **Ivocerin**, which is 100% amine-free for enhanced shade stability. **Variolink Esthetic LC** is indicated for use with glass-ceramic, lithium disilicate and composite restorations such as inlays, onlays, and veneers with a material thickness of less than two millimeters and sufficient translucency for light penetration. **Variolink Esthetic DC** is designed for cases in which full light-curing cannot be achieved, including opaque ceramic and composite inlays, onlays or partial crowns, and crowns and bridges. Each formulation has five shades available: **Light+**, **Light**, **Neutral**, **Warm**, and **Warm+**. **Variolink Esthetic LC** is supplied in 2 g syringes, while **Variolink Esthetic DC** is available in 5 g and 9 g (**Light**, **Neutral** and **Warm** shades) automix syringes.

**99%**  
rating at  
recall

### Clinical Evaluation Protocol

A total of 216 restorations were placed with **Variolink Esthetic** between January 2016 and May 2017. As of February 2018, 26 restorations had been placed less than 6 months at recall, 64 from 6 months to less than 1 year prior to recall, 73 between 1 year and less than 18 months previously, and 53 at least 18 months prior (Figure 1). Restorations were placed on 56 molars, 40 bicuspid and 120 anterior teeth (Figure 2). The restorations included 26 upper and 30 lower molar crowns, 19 upper and 19 lower bicuspid crowns, 86 upper anterior and 15 lower anterior crowns; 1 upper bicuspid, 15 upper anterior, and 1 lower anterior veneers; 3 upper anterior bridges; and 1 upper bicuspid onlay. Sixteen restorations were placed with **Variolink Esthetic LC** and 200 with **Variolink Esthetic DC**.

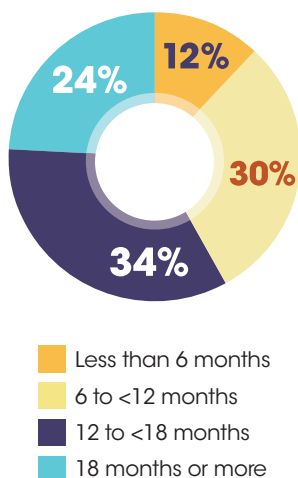
### Results at 18-Month Recall:

Recalled restorations were evaluated in the following areas: esthetics, lack of sensitivity, resistance to marginal discoloration, and resistance to fracture/chipping. Restorations were evaluated on a 1-5 rating scale:

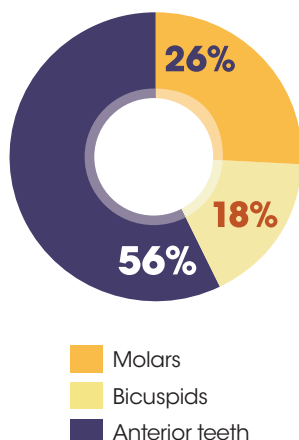
1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent.

Three teeth were extracted at recall for reasons unrelated to the restorations.

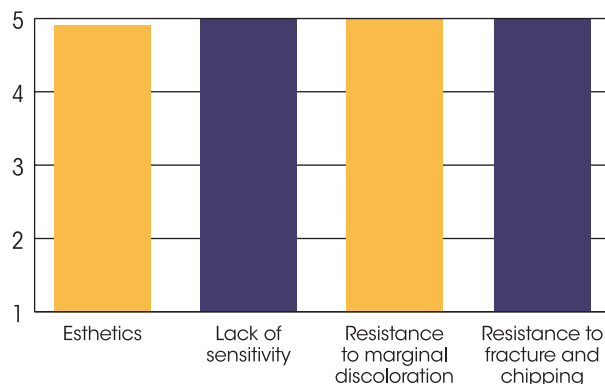
**Fig. 1:** Age of restorations using **Variolink Esthetic**.



**Fig. 2:** Area of restorations using **Variolink Esthetic**.



**Fig. 3:** Results of one-year recall of restorations placed with **Variolink Esthetic**.



### Esthetics

Two hundred and thirteen restorations (99%) placed with **Variolink Esthetic** (16 with LC cement and 197 with DC cement) received an excellent rating of five for esthetics (Figure 3). Clinicians commented on the excellent esthetics.

### Lack of Sensitivity

Two hundred and fourteen of the 216 restorations placed with **Variolink Esthetic** received an excellent rating of 5, with no reports of sensitivity (Figure 3).

### Resistance to Marginal Discoloration

All recalled restorations (100%) placed with **Variolink Esthetic** received an excellent rating of five (Figure 3). No microleakage was observed.

“GREAT SHADE SELECTION AND SHADES THAT REMAIN STABLE OVER TIME.”

### Consultants' Comments

- “Variolink has been my go to esthetic cement for 30 years. It results in excellent esthetics every time.”
- “Variolink Esthetic is an improvement over a proven cement.”
- “I love the DC feature of Variolink Esthetic - it gives me assurance of a good set even in deep preparations.”

### Resistance to Fracture/Chipping

At recall, 214 restorations placed with **Variolink Esthetic** were intact and received an excellent rating of five (Figure 3). Two restorations fractured but these failures were deemed not related to the cement.



### Variolink Esthetic 18-Month Clinical Performance

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### Conclusion

Over the 18-month recall period, the clinical performance of recalled restorations placed with **Variolink Esthetic** was **exceptional**. Esthetics was **excellent**, as were the lack of sensitivity, resistance to marginal discoloration, and resistance to fracture/chipping. The restorations will continue to be monitored over time.



At 18 months, **Variolink Esthetic** received a clinical performance rating of

**99%**  
+ + + + +