



Glidewell Laboratories  
www.glidewell dental.com

99%  
rating  
at recall

## Introduction:

**Obsidian®** is a lithium silicate ceramic with high flexural strength that when pressed to metal results in a restoration with superior strength that is highly esthetic and chip resistant. They are ideal in situations where the preparation is highly discolored and optimal strength is required.

## Clinical Evaluation Protocol:

A total of 127 **Obsidian Fused to Metal Restorations** were placed over a 12-month period. The **Obsidian** restorations included 27 anterior units and 100 posterior units (Figure 1). Of the 127 units, 40 involved three- to seven-unit bridges, while 87 were single crowns (Figure 2). All restorations were fabricated by Glidewell Laboratories. Approximately one half the restorations were cemented with self-adhesive resin cement, while the remaining half were cemented with resin-modified glass ionomer cement (*Fuji Plus*).

Fig. 1: Distribution of **Obsidian** restorations at placement.

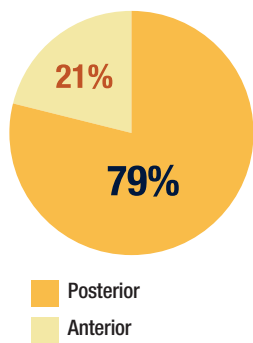


Fig. 2: Types of **Obsidian** restorations at placement.

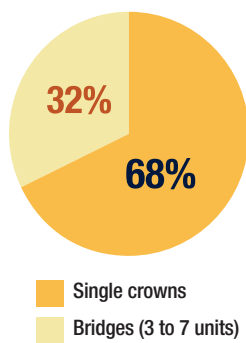


Figure 4. **Obsidian Fused to Metal** restoration (tooth #29) at six months.



Figure 5. **Obsidian Fused to Metal** restoration (bridge at #22-28).

## Results at One-year

Of the 127 restorations placed during the first year, 74 (58%) were recalled and evaluated in the following areas: esthetics, lack of sensitivity, resistance to fracture/chipping, resistance to marginal discoloration, and wear resistance. Each category was rated on a 1 to 5 scale (Figure 3). Each category was rated on a scale of 1 to 5. 1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent.

## Summary:

The **Obsidian Fused to Metal Restorations** received from Glidewell Laboratories were rated excellent in esthetics, fit and marginal adaptation at placement. At one year, none of the recalled restorations exhibited wear, microleakage or tooth sensitivity after cementation (Figure 3). One restoration in a patient who was a heavy bruxer fractured and was replaced. Four of the recalled restorations received a rating of 4, because they were slightly greyish in appearance. **Obsidian Fused to Metal Restorations** performed extremely well at one year and received a 99% clinical performance rating.

## Consultant Comments

- "Beautiful restorations with a great fit."
- "The ones I have seen look great one year after cementation."
- "Very esthetic bridges - look like all-ceramic bridges."
- "Ideal for highly discolored preps."

Fig. 3: Results of One-year Recall of **Obsidian Fused to Metal Restorations**.

