

BruxZir Solid Zirconia Crowns and Bridges 3-year Clinical Performance Report

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RATINGS:
 Excellent + + + + +
 Very Good + + + +
 Good + + +

LONG-TERM CLINICAL PERFORMANCE

Glidewell Laboratories

www.glidewell dental.com

Description

A total of 822 **BruxZir Solid Zirconia Crowns and Bridges** have been placed over the past four years. They included single crowns (87%) and three- and four-unit bridges (13%). The restorations were cemented with adhesive and self-adhesive resin cements.

Purpose

The purpose of this evaluation was to report the clinical performance of **BruxZir Solid Zirconia Crowns and Bridges** at three years.

Clinical Evaluation Protocol

At recall, 632 **BruxZir** restorations were evaluated, including crowns; three- and four-unit bridges; and implant-supported crowns and bridges (Figure 1). The majority (88%) of the restorations were fabricated by *Glidewell Laboratories*, while 12% were fabricated by Apex Dental Milling. Of the 632 recalled restorations, 33% were up to 3 years old, 46% were 3-4 years old and 21% were over 4 years old (Figure 2).

BruxZir restorations were evaluated in the following categories: esthetics, resistance to fracture or chipping, resistance to marginal discoloration, wear of zirconia and opposing dentition, and retention. The restorations were evaluated on a 1-5 rating scale: 1=poor, 2=fair, 3=good, 4=very good, 5=excellent.



BruxZir, No. 3 at 3 years

Consultants' Comments

"Beautiful Crown. Perfect fit and no adjustments."

"One of the nicest implant crowns I have seen."

"BruxZir is a great choice for worry-free crowns and a good value."

"BruxZir is my go-to restoration for posterior teeth; it looks good and I know it will last."

"I have been using BruxZir for four years or more and I have not been disappointed – neither have my patients."

FIGURE 1

Distribution of BruxZir Solid Zirconia Crowns and Bridges at Three-year Recall.

- Crowns
- Bridges (3 and 4 units)
- Implant-supported Crowns and Bridges

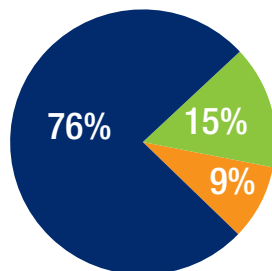
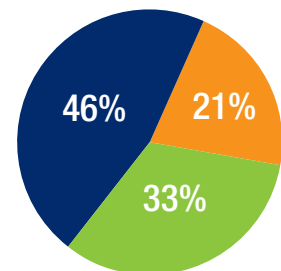


FIGURE 2

Age of BruxZir Solid Zirconia Crowns and Bridges at Three-year Recall.

- Less than 3 years old
- 3 to 4 years old
- More than 4 years old



Clinical Observations

Esthetics

The esthetics of **BruzZir** was rated excellent (Figure 3) when one considers the consistency of the shade and compares the esthetics to other monolithic zirconia restorations. Other zirconia restorations are generally more opaque and lack opalescence. **BruzZir** restorations were not compared with esthetic ceramic restorations resulting from layered porcelain. **BruzZir** restorations are perfect for patients desiring more uniform and whiter teeth like a B1 shade. The new **BruzZir 16** pre-shaded zirconia, recently introduced by *Glidewell Laboratories* could further improve esthetics.

Resistance to Fracture/Chipping

The chipping or fracture of **BruzZir** single crowns has been practically non-existent (Figure 3). One second molar crown did fracture, but it was likely due to lack of occlusal clearance and reduction. Having less than a 1 mm of clearance is not recommended for molars. None of the three- or four-unit bridges have fractured.

Resistance to Marginal Discoloration

None of the restorations exhibited any marginal discoloration at four years (Figure 3). The opacity of the crowns may help camouflage any staining or microleakage.

Wear Resistance

Almost no wear was observed on **BruzZir** restorations and very minimal wear was observed on opposing natural dentition at four years (Figure 3). More wear was noted on gold crowns opposing **BruzZir** restorations.

Retention

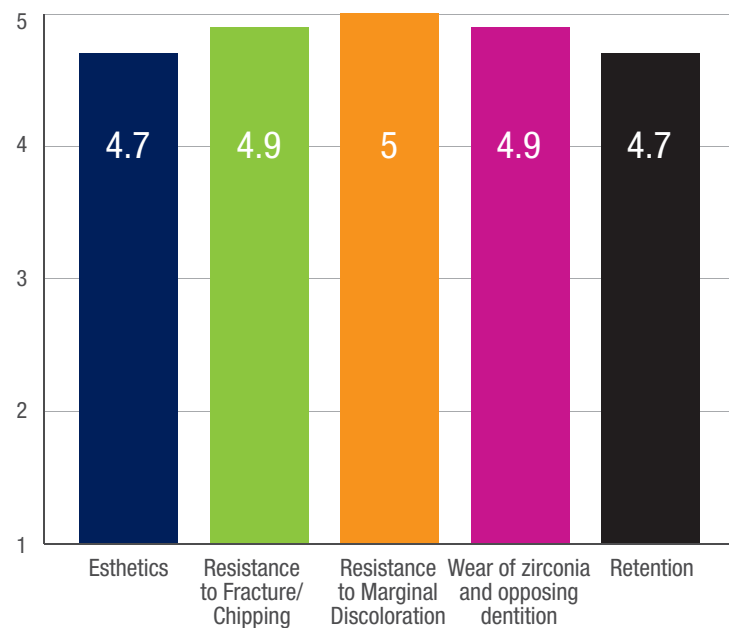
Twenty-seven out of the 822 **BruzZir** crowns debonded (3%) and required recementation over the evaluation period (Figure 3). This debonding rate is slightly higher (3% vs 2%) when compared to non-zirconia crowns that THE DENTAL ADVISOR has documented over time.

Conclusions

Over a three-year evaluation period, **BruzZir Solid Zirconia Crowns and Bridges** have proven to be excellent restorations with respect to esthetics and dependability. **BruzZir Solid Zirconia Crowns and Bridges** received a 97% clinical performance rating.

FIGURE 3

Results of BruzZir Solid Zirconia Crowns and Bridges at Three-year Recall.



THE DENTAL ADVISOR – Clinical Recommendations

- *THE DENTAL ADVISOR highly recommends the use of **BruzZir** for three- and four-unit bridges.*
- *Data on file at THE DENTAL ADVISOR indicate that using a zirconia primer improves the bond strength of adhesive and self-adhesive resin cements to zirconia by up to 50%. It is advisable to prime zirconia crowns prior to cementation.*
- *It is highly recommended for posterior crowns and three- and four-unit bridges as well as implant-supported crowns and bridges.*