

More Beauty, Plenty of Brawn



— INTRODUCING —

BruxZir®

A N T E R I O R

— S O L I D Z I R C O N I A —



The #1 prescribed brand of solid zirconia is available at dental laboratories nationwide. Over 9 million restorations delivered through the Authorized BruxZir® Laboratory network

The BruxZir Phenomenon – A Clinician’s Perspective by Dr. Michael DiTolla

November 2010 is a milestone in dental history. That’s the first time that doctors prescribed more BruxZir restorations than PFM restorations. At the time, BruxZir Solid Zirconia was nearly two years old and PFMs were 50 years old. Here at the lab, it confirmed a trend that we had been observing during that time: The days of the PFM being the dentist’s everyday restoration were coming to a close. The sales of BruxZir never dipped below those of the PFM again; in fact, the gap between the two continues to grow wider as BruxZir grows and PFMs continue to shrink (see graph to right).

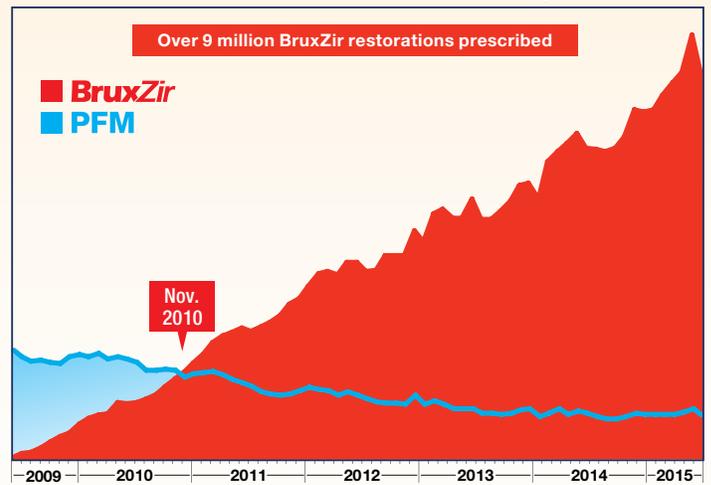
The rapid growth of BruxZir Solid Zirconia took us somewhat by surprise, as our original intention for the material was as a cast gold or metal occlusal PFM replacement. Almost every dentist I know agrees that cast gold is the finest indirect restorative material we have in dentistry. Unfortunately, almost every patient I know agrees that cast gold or a PFM with a metal occlusal is the least esthetic indirect restorative material we have in dentistry.

As the translucency and esthetics of BruxZir Solid Zirconia continue to improve, it has transitioned from being solely a posterior material to being an anterior material as well, meaning it can be used in almost any clinical situation. The biggest reasons for the rapid growth of BruxZir are high strength and fit. As a monolithic restoration with no porcelain on it, BruxZir Solid Zirconia has the lowest fracture rate of any restoration (besides cast gold) in our lab. It’s clear that dentists place strength very close to the top, if not at the top, of their list of desirable characteristics for an everyday crown & bridge material.

By far the most common comment we get from dentists about BruxZir restorations is how well they fit compared to most of the crowns they have used in the past. It took us a few months to figure out what these dentists really meant. It wasn’t that they used to cement crowns with open margins; it was that the emergence profile of BruxZir crowns blended with the tooth structure and soft tissue better than any material they had previously used (again, with the exception of cast gold).

The combination of fit, strength and improved esthetics has made BruxZir Solid Zirconia the most prescribed restoration in the lab, and it shows no signs of slowing down. Most recently, we have introduced BruxZir Anterior as the newest member of the BruxZir family. By increasing the amount of yttria in the zirconia oxide, we were able to create a material that competes esthetically with lithium disilicate, while still being 50 percent stronger than lithium disilicate. BruxZir Anterior means that solid zirconia can now be your restoration of choice in the anterior just like it is in the posterior.

BruxZir vs. PFM – Units Produced per Month



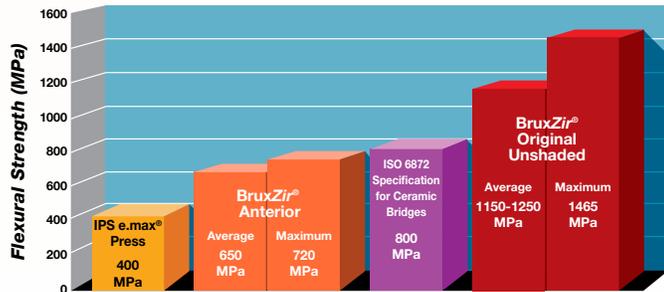
Dr. Michael C. DiTolla

BruxZir® Anterior, significantly more translucent for natural vitality

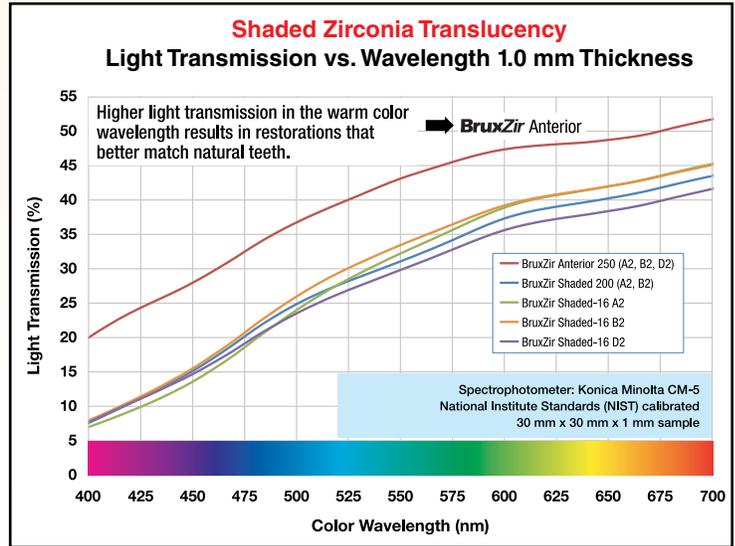
BruxZir® Anterior is the latest advancement in the BruxZir Solid Zirconia product line. This highly esthetic restorative material is designed specifically to satisfy the esthetic and functional requirements of the anterior region of the mouth. Exhibiting an average flexural strength of 650 MPa with translucency and color similar to natural dentition, BruxZir Anterior is an ideal, esthetic solution for your anterior and premolar crowns or 3-unit bridges.



BruxZir Anterior restorations exhibit a substantially higher light transmission in the warm color wavelengths than any previous version of BruxZir Solid Zirconia. In the backlit restorations above, note how the BruxZir Anterior crowns closely match the vital translucency of natural dentition.



Flexural Strength Testing per ISO 6872 specification.



BruxZir Shaded zirconias allow for improved shade consistency, exhibiting a higher translucency when compared to other pre-shaded zirconias.



These Captek™ crowns had been in place for 15 years and the patient exhibited a possible metal allergy. Though the crowns had served her well, she was not pleased with the visible margins and was happy to hear that there are now several more esthetic options available.



The underlying preparations were tetracycline stained and would show through had IPS e.max® HT (High Translucency) ingots been used. The case was restored with IPS e.max MT (Medium Translucency) and BruxZir Anterior crowns, which combine an esthetic level of translucency with the ability to block out discolorations.



The crowns on tooth #6, #7 and #8 are BruxZir Anterior and the crowns on tooth #9, #10 and #11 are IPS e.max. Due to the increased translucency of BruxZir Anterior you can see that these solid zirconia crowns come much closer to matching the proven esthetics of IPS e.max.



A patient presented with the chief complaint of wanting to replace the failing composite on one of their maxillary incisors. After noting the minimal wear and absence of para-functional habits, caries were excavated, a preparation was made, and then a BruxZir Anterior crown was delivered.



A single-unit BruxZir Anterior crown was seated on tooth #9. Matching a shade in the esthetic zone has been a difficult task for dentists, and BruxZir Anterior has moved the bar ahead in terms of making that achievable with monolithic zirconia. We might be closer than most think to the day where monolithic zirconia crowns are the treatment of choice for restorations in the esthetic zone.





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

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THE DENTAL ADVISOR
www.dentaladvisor.com

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

LONG-TERM CLINICAL PERFORMANCE

Glidewell Laboratories

www.glidewelldental.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

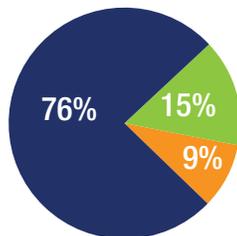
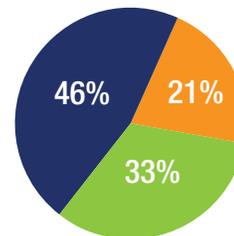


FIGURE 2

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 **BruxZir** 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. **BruxZir** restorations were not compared with esthetic ceramic restorations resulting from layered porcelain. **BruxZir** restorations are perfect for patients desiring more uniform and whiter teeth like a B1 shade. The new **BruxZir 16** pre-shaded zirconia, recently introduced by *Glidewell Laboratories* could further improve esthetics.

Resistance to Fracture/Chipping

The chipping or fracture of **BruxZir** 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 **BruxZir** restorations and very minimal wear was observed on opposing natural dentition at four years (Figure 3). More wear was noted on gold crowns opposing **BruxZir** restorations.

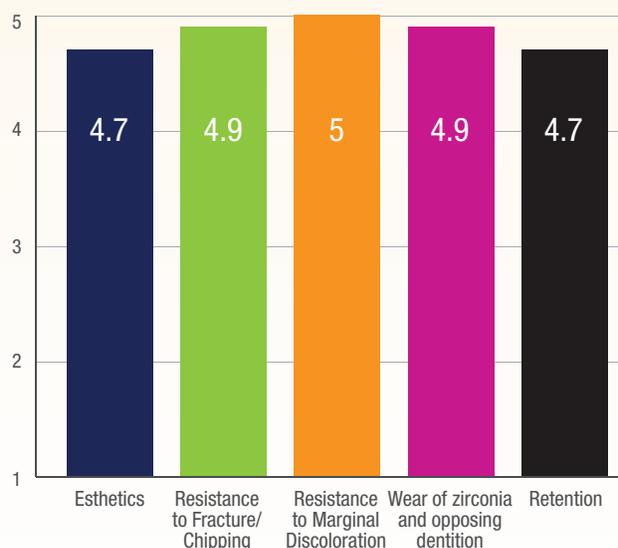
Retention

Twenty-seven out of the 822 **BruxZir** 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, **BruxZir Solid Zirconia Crowns and Bridges** have proven to be excellent restorations with respect to esthetics and dependability. **BruxZir Solid Zirconia Crowns and Bridges** received a 97% clinical performance rating.

FIGURE 3 Results of BruxZir Solid Zirconia Crowns and Bridges at Three-year Recall.



THE DENTAL ADVISOR – Clinical Recommendations

- *THE DENTAL ADVISOR highly recommends the use of **BruxZir** 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.*



See inside for the expanding list of
Authorized BruxZir Labs

BruxZir® Solid Zirconia is the **#1** prescribed brand of solid zirconia, with more than 9 million restorations prescribed in 6 years.

BruxZir® Anterior Preparation Guidelines

