RelyX Ultimate Adhesive Resin Cement is an adhesive resin cement available in a dual-barrel syringe with mixing tips for easy mixing and dispensing. Used in conjunction with Scotchbond Universal Adhesive, it results in high bond strength to both enamel and dentin — measured to be over 30 MPa by THE DENTAL ADVISOR. RelyX Ultimate Adhesive Resin Cement includes a component that activates the self-cured function of the bonding agent and eliminates the need for an additional dual-cure activator. Scotchbond Universal Adhesive also functions as a primer for silica-based ceramics, composite, zirconia and metal substrates. It can be used with total-etch, selective-etch or self-etch bonding techniques. The combination can be used for cementing silica-based ceramic (glass ceramic), zirconia, and PFM and composite restorations including fiber posts. RelyX Ultimate Adhesive Resin Cement is available in Translucent, B 0.5 (Bleach), A1 and A3 Opaque shades.

Clinical Evaluation Protocol:
A total of 2126 restorations were placed over a five-year period beginning in January 2012 using RelyX Ultimate Adhesive Resin Cement and Scotchbond Universal Adhesive. This included 222 pre-existing restorations that had previously been cemented using a different cement and were recemented with RelyX Ultimate Adhesive Resin Cement. At five years, 1532 restorations had been recalled (Figure 1). The recalled restorations consisted of 1331 crowns, and 173 three- to five-unit bridges. The remaining restorations consisted of inlays, onlays, veneers and bridges (Figure 2). Sixty-three percent of the restorations were in molars, 25% in premolars and 12% in the anterior region (Figure 3). The vast majority of the restorations were zirconia and silica-based ceramic restorations, with the remainder being ceramic-metal restorations (Figure 4).
Resistance to Marginal Discoloration

Resistance to marginal discoloration was rated excellent (Figure 5). Only 19 restorations received a rating lower than 5. Nine had very slight discoloration and received a rating of 4. Of the remaining 10 restorations, six were replaced due to tooth failures and the remaining four were replaced because they received a rating of 2. Even so, the majority of the restorations received a rating of 5.0 at the five-year recall period.

Retention

Retention was rated excellent (Figure 5). During the five-year recall period, 26 of 1532 restorations debonded (1.7% debond rate). Of the 26 debonded restorations, nine of the debonds were associated with tooth failures not related to the cement. The remaining 17 restorations that debonded were recemented with RelyX Ultimate Adhesive Resin Cement. Overall, the retention rate was high (98%), attesting to the high bond strength of the cement to both restorative materials and tooth structure.

Summary

Over a five-year period, the clinical performance of RelyX Ultimate Adhesive Resin Cement used with Scotchbond Universal Adhesive was excellent, based on the ratings for resistance to marginal discoloration and retention. At five years, RelyX Ultimate Adhesive Resin Cement received a clinical performance rating of 99%.