

## 3104 Clinical Evaluation of a Giomer Restorative System: Thirteen-Year Recall

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Presentation Type: Poster Session

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**Objective:** To evaluate the long-term performance of a Giomer resin-based restorative material (Beautifil, Shofu Inc., Kyoto, Japan) in combination with a self-etching primer (FL-Bond, Shofu Inc.) for posterior restorations.

**Methods:** After approval by the Institutional Review Board, 61 restorations, 26 Class I and 35 Class II, were placed by two clinicians in 31 patients ranging in age from 21 to 62 years-old (mean 34). Inclusion criteria: 1) patients with a molar-supported permanent dentition free of any edentulous spaces and occlusal interference of clinical significance; 2) one or more molar or premolar teeth requiring new or replacement Class I or Class II restorations. Restorations were placed under rubber dam isolation. Two clinicians examined the restorations using the Ryge Criteria observing the following variables: color match, marginal adaptation, anatomy, surface roughness, marginal staining, interfacial staining, proximal and occlusal contacts, secondary caries, post-operative sensitivity, and luster. Restorations were examined at the baseline, 1-, 2-, 4-, 8- and 13-year recalls. Three clinicians examined the restorations at the 13-year recall.

**Results:** All restorations were examined at 1-year (100%), 58 (95%) at 2-year, 39 (64%) at 4-year, 41 (67%) at 8-year, and 41 (67%) at the 13-year recall exam (19 Class I and 22 Class II). After 13 years, 27 restorations were intact, and 14 failed (1 tooth was extracted, 10 had crowns, 2 had missing fillings, and 1 was replaced). Fourteen restorations maintained excellent ratings, 11 had minor changes (from alpha to bravo) in one or more categories, and two had secondary caries. Therefore, 25 (61%) of the 41 restorations observed had either excellent or satisfactory ratings after 13 years of placement.

**Conclusion:** The study showed that most of the restorations observed at 13-year recall maintained acceptable clinical qualities. These overall positive results may be related to the unique Giomer filler particles. Support Shofu Inc.

**This abstract is based on research that was funded entirely or partially by an outside source:** Shofu Inc

**Keywords:** Adhesion, Composites, Dental materials, Effectiveness and Self-etching primer

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