

## Grandio Flow – Restorations of Class II cavities

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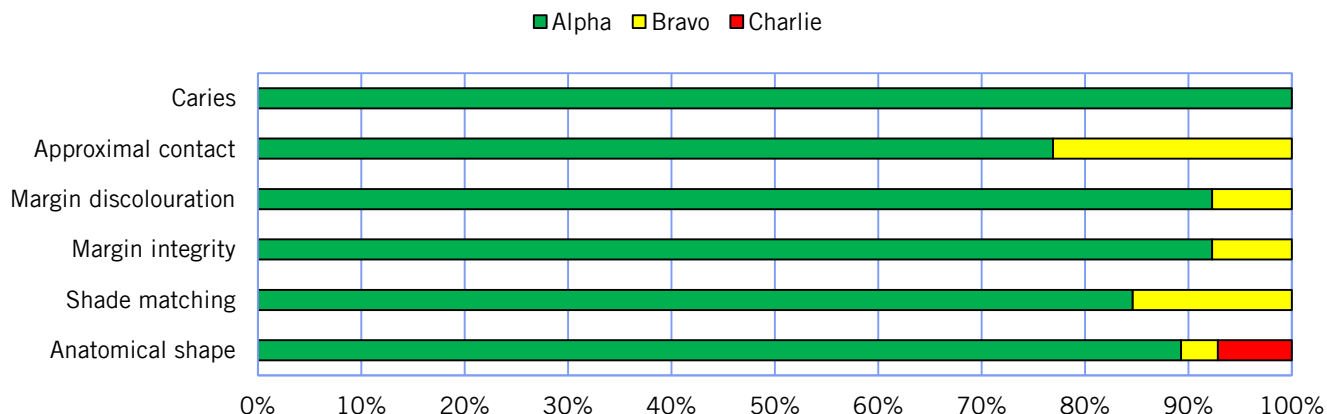
**Grandio Flow, the flowable composite made by VOCO, is characterised by the fact that it exhibits the physical properties of a universal composite in the hardened state. Whether it can also be used for the restoration of Class II cavities was examined in a clinical study at the University of Birmingham (Alabama, USA).**

By using isolated nano-fillers, it is possible to realise a flowable composite with high filler content; Grandio Flow thus has an excellent filler content for a flowable of 80.2 %. This high filler content provides the material with the properties of a universal composite, e.g., with reference to transverse strength, compressive strength, fracture resistance and edge stability. The question thus arises, whether this product can also be used for the restoration of Class II cavities.

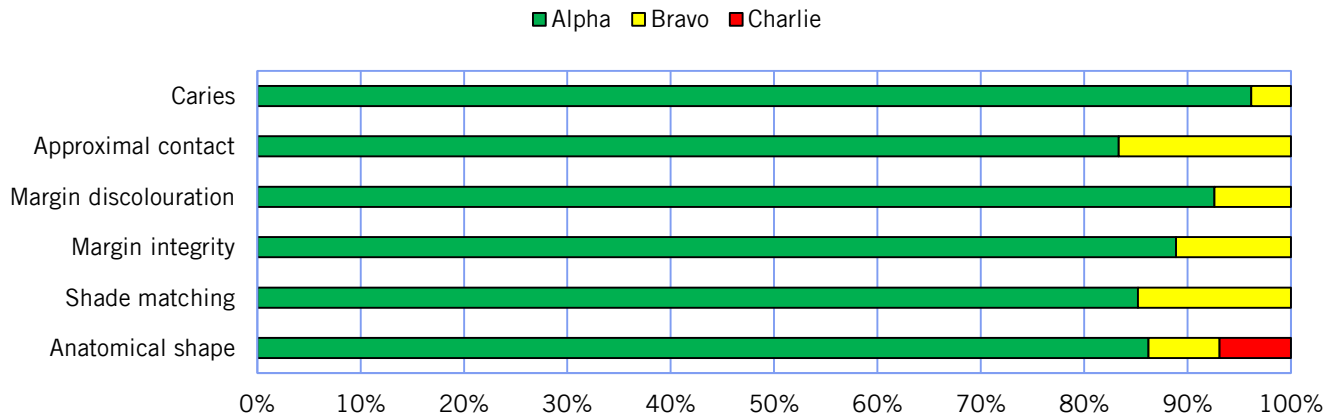
### Clinical study at the University of Birmingham (Alabama, USA) <sup>[1]</sup>

A comparative, clinical study in split-mouth design was conducted at the University of Birmingham (Alabama, USA) in order to more closely examine the above-stated question. In this study, 32 patients with moderately-sized, Class II cavities in the proximal area were selected. The cavities were then restored with Grandio, the nano-hybrid composite, on one side, and with Grandio Flow, the flowable, on the other side (64 restorations). Scotchbond MP was used as the bond in all of the restorations.

The results of the examination after 12 months are shown here. The evaluation was carried out using the Ryge criteria. 88 % of the patients appeared for the follow-up examination. Figure 1 shows the results for the restorations with Grandio. The results for Grandio Flow are shown in Figure 2.



**Figure 1:** Result for Grandio after 12 months



**Figure 1:** Result for Grandio Flow after 12

The study came to the conclusion that there are no significant differences between the examined materials.

**Conclusion: No statistically significant difference could be found in the restorations with the different materials after 12 months. The flowable exhibited results that were just as good as the results from Grandio, the highly filled nano-hybrid composite.**

[1] B. Waldo, J. Burgess, R. L. Meador, D. Givan, M. Anabtawi, L. C. Ramp, *IADR Miami 2009*, Poster 116851