



# Clinical Update

## 3M™ Z100™ Restorative

University  
of Manitoba

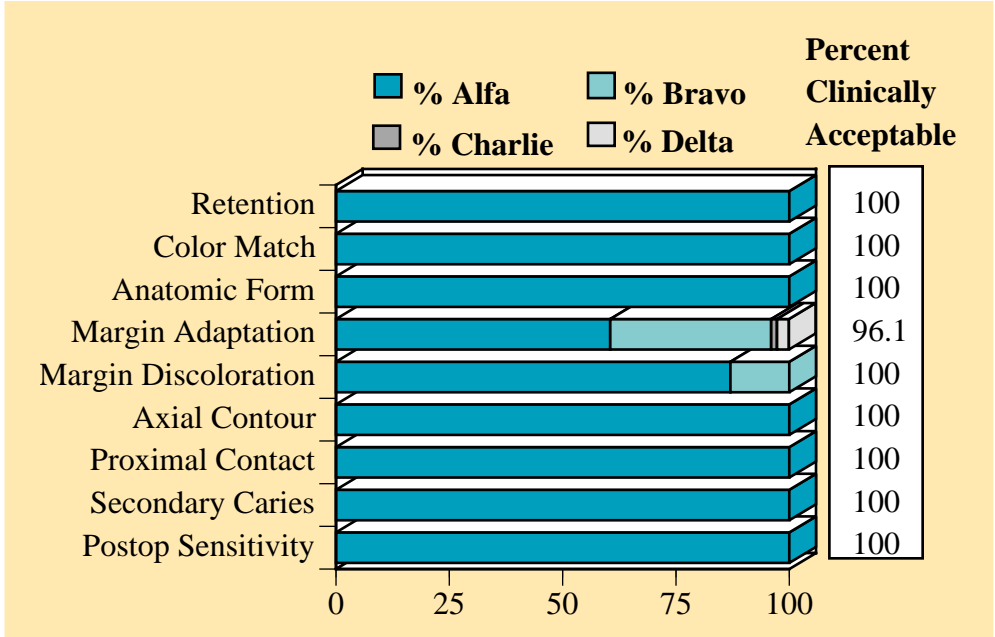
Winnipeg,  
Canada

Four Year  
Recall  
Summary

The following presents a summary of the four year recall results of a clinical study involving 3M™ Z100™ Restorative at the University of Manitoba in Winnipeg, Canada. The protocol for this study follows guidelines established by the American Dental Association.

At four years, seventy-six Class I and II molar restorations were evaluated directly using USPHS (RYGE) criteria. As shown at left, the majority of the restorations involved two or more surfaces (78%). Thirteen restorations were very large multi-surface restorations involving cusp replacement. The USPHS criteria together with their respective scores are depicted below.

Distribution of Restorations	
1 surface	17
2 surfaces	29
3 surfaces	17
4 surfaces	10
5 surfaces	3



*“...Z100 maintained an excellent anatomic form, color stability and exhibited excellent durability.”*

Two adjacent restorations were recorded to have fractured along the buccal half of the proximal box. The occlusal relationship (anterior open bite) and the configuration of the cavo surface enamel finish may have contributed to these fractures. One, four-surface restoration required replacement due to marginal defects. The remainder of the restorations (96%) were clinically acceptable.

### Wear

Generalized wear was assessed by visual comparison of die stone casts against calibrated standards (Goldberg-Leinfelder method). It was reported that the amount of general occlusal wear which took place between the second and four year recalls was so minute that it was extremely difficult to discriminate the differences. The average wear after four years was measured to be 39 microns from baseline.

In conclusion it was stated that, “Based on the data obtained at the 4 year recall, the composite material Z100 maintained an excellent anatomic form, color stability and exhibited excellent durability.”

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