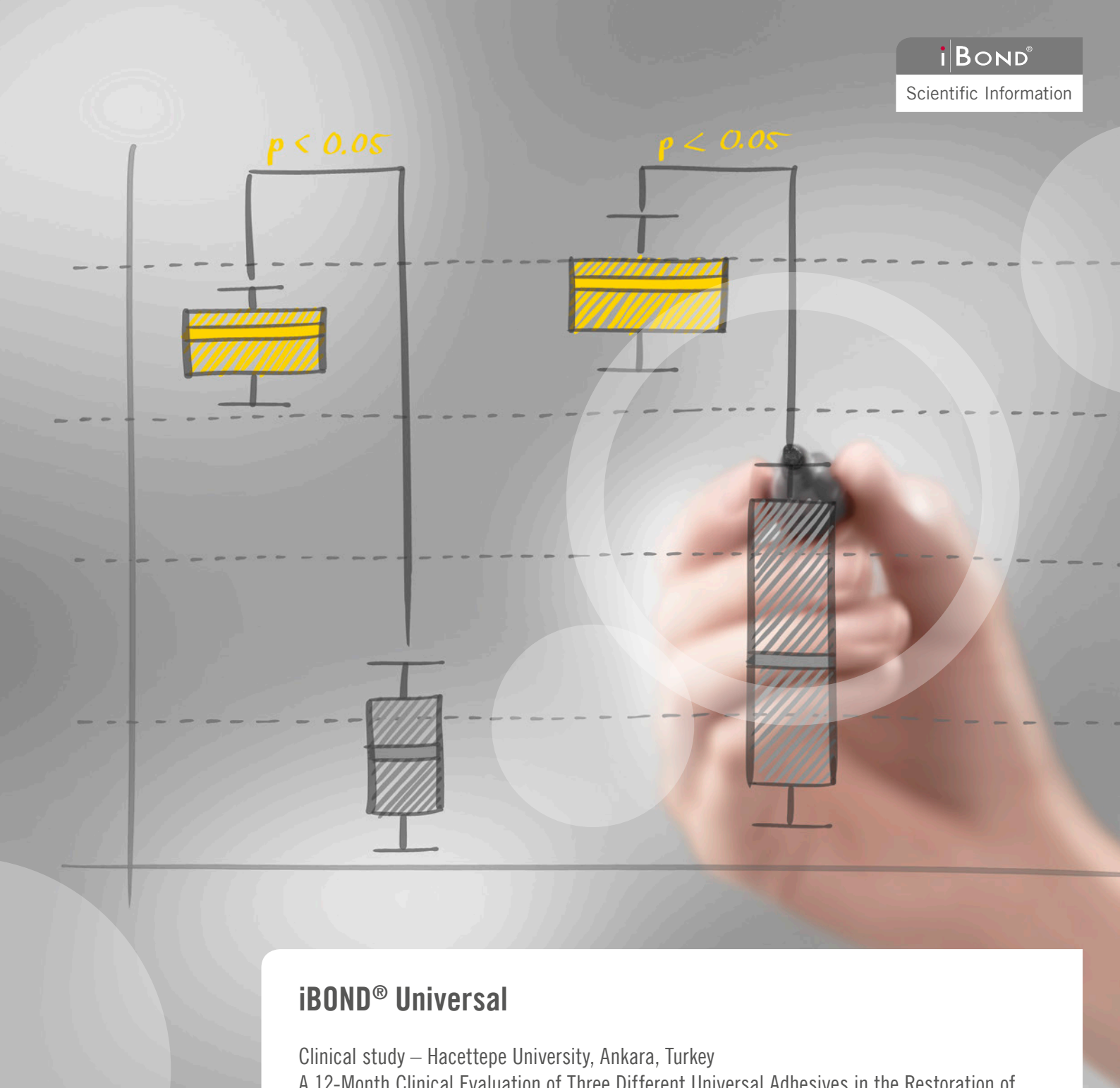


iBOND® Universal

Clinical study – Hacettepe University, Ankara, Turkey
A 12-Month Clinical Evaluation of Three Different Universal Adhesives in the Restoration of Non-Carious Cervical Lesions

Various in vitro-tests have demonstrated the good adhesive properties of iBOND Universal. Bond strength and marginal adaptation can be evaluated after certain ageing treatments and can be compared to other adhesive systems.
But clinical studies are needed to examine how an adhesive performs in a real clinical situation. To evaluate mainly the adhesive properties of the bonding systems, non-carious cervical lesions are restored in those tests.
The following study of the Hacettepe University in Ankara (Turkey) has confirmed the excellent bonding behaviour of iBOND Universal in such a randomised controlled clinical study.

Giving a hand to oral health.

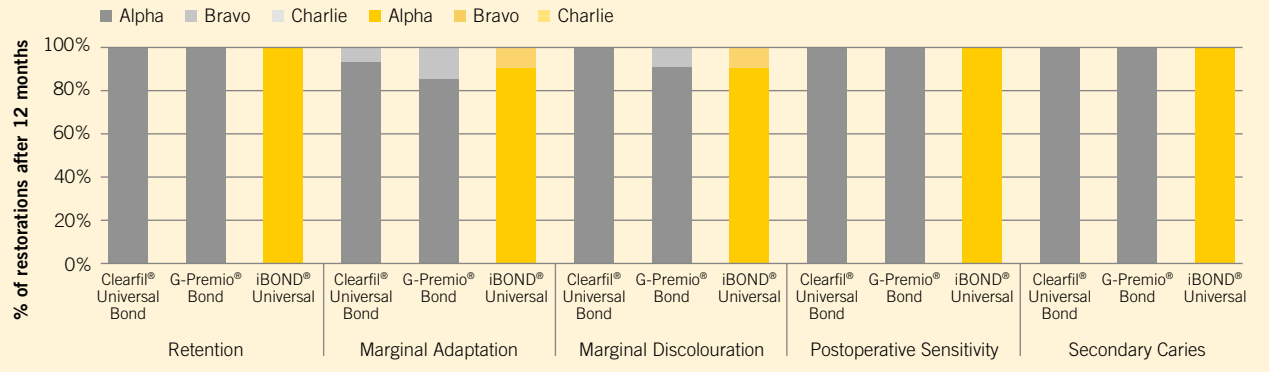
KULZER
MITSUI CHEMICALS GROUP

Clinical study – Hacettepe University, Ankara, Turkey
A 12-Month Clinical Evaluation of Three Different Universal Adhesives in the Restoration of Non-Carious Cervical Lesions

Objectives
The aim of this randomised, controlled prospective clinical study was to evaluate and compare the performances of three universal adhesives in combination with a flowable composite resin for the restoration of non-carious cervical lesions over a 12-months observation time.

Methods
18 patients received 99 restorations from a single operator. The cervical lesions were divided into three groups to test the different universal adhesives: Clearfil Universal (Kuraray), iBOND Universal (Kulzer) and G-Premio Bond (GC). No enamel bevel was prepared and no mechanical retention was created for the cervical lesions. A selective enamel etching was performed with 37 % phosphoric acid prior the application of the adhesives. The adhesives were used following manufacturers' instructions and the lesions were restored with a flowable composite (Gaenial Flowable Universal, GC). Restorations were finished and polished immediately after placement and scored with regard to retention, marginal discoloration, marginal adaptation, sensitivity, surface texture and colour match using modified USPHS criteria after a week, 6 and 12 months. Descriptive statistics were performed using Chi-square tests. The intragroup comparison between one week and 12 months was done using Cochran's Q tests followed by McNemar's test ($p<0.05$ %)

Results
Excellent clinical performance after 12 months in class V restorations bonded with iBOND Universal in a selective enamel etch mode



All recall rates were 100 %. None of the restorations was lost after 12 months. No postoperative sensitivity or secondary caries was found. No statistical differences were found among the tested adhesives for any criteria evaluated ($p>0.05$).
G-Premio Bond showed a statistically significant difference in marginal adaptation between 1 week and 12 months.

Conclusions
All three tested adhesive systems demonstrated similar clinical behaviour during 12-months observation time in the restoration of non-carious cervical lesions.

Comment
This study confirms the excellent clinical performance of iBOND Universal in class V restorations after 12 months. Because of the fact that these restorations possess no undercuts or other special retentive preparation, mainly the bonding performance of the adhesives is tested. iBOND Universal received alpha readings in most of the categories apart from marginal adaptation and discolouration where also maximum 10 % bravo readings were found. Alpha stands for perfect restorations, whereas bravo scores indicate minor deviations which are clinical acceptable.

Source
Oz F, Kutuk Z, Ozturk C, Soleimani R, Gurgan S: A 12-Month Clinical Evaluation of Three Different Universal Adhesives in the Restoration of Non-Carious Cervical Lesions. J Dent Res 97 (Spec Iss B): poster #2444, 2018

The study was abbreviated, summarised and commented and all diagrams and titles have been established by Kulzer.

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