Short explanation about this document:

This is the literature list for
- **Glass Hybrids**

Clinical studies are our Unique Selling Proposition, and the literature list focuses on this type of evidence. However, still some relevant *in-vitro* studies are in this list in order to provide support to mechanical/physical properties.

Please adapt this document according the needs, laws and regulations of your area.

Please upload it in your local website according the product category:

- GH list for EQUIA Forte and EQUIA Forte HT

Thank you.

Glass Hybrids

Cost-effective, long-term restorative alternative

Glass Hybrids

Scientific Sheet

Feb. 2024

EQUIA Forte
EQUIA Forte HT

References – Clinical studies

EQUIA® Forte

TITLE	**Comparative evaluation of postoperative sensitivity in bulk fill restoratives: A randomized controlled trial**
REFERENCE	Hirani RT *et al.* J Int Soc Prev Community Dent. 2018. 8(6):534-539. doi: 10.4103/jispcd.JISPCD_218_18
Patients treated with EQUIA Forte and Activa Bioactive presented lower POS when compared to groups restored with Cention N. Follow-up period: 24 h, 1 week and 1 month.	
Number of Patients evaluated: 144 patients	

TITLE	**Glass hybrid restorations as an alternative for restoring hypomineralized molars in the ART model**
REFERENCE	Grossi J *et al*, BMC Oral Health. 2018. 18(1):65. doi: 10.1186/s12903-018-0528-0
A success rate of 98.3% was observed after 6 and 12 months. The only failure occurred in a restoration involving three or more surfaces presenting the breakdown of all cusps.	
Number of Patients evaluated: 44 patients **Number of restorations: 60 restorations**	

TITLE	**Multi-center clinical evaluation of bulk-fill glass hybrid restorations: One-year report**
REFERENCE	Turkun S *et al.* J Dent Res Vol 97(Spec Iss B): 1972. https://iadr.abstractarchives.com/abstract/18iags-2953131/multi-center-clinical-evaluation-of-bulk-fill-glass-hybrid-restorations-oneyear-report
In this split-mouth study design, EQUIA Forte and the composite Tetric EvoCeram were equally successful in moderate to large size Class II restorations	
Number of Patients evaluated: 180 patients **Number of restorations: 360 restorations**	

TITLE	**Does the depth of the cavity and the activity of the lesion in primary molars influence in the success of the restoration?**
REFERENCE	Baumotte L *et al.* J Dent Res Vol 98 (Spec Iss A): 0605. https://iadr.abstractarchives.com/abstract/19iags-3186371/does-the-depth-of-the-cavity-and-the-activity-of-the-lesion-in-primary-molars-influence-in-the-success-of-the-restoration
EQUIA Forte showed a success rate of 94% after a mean evaluation time of 13.3 months. Cavity depth and caries lesion activity did not influence the restoration's survival.	
Number of Restorations: 45 restorations	

References – Clinical studies

EQUIA® Forte

TITLE	**High-viscosity glass ionomer used with selective cavity preparation in MIH**
REFERENCE	Sezer B *et al.* J Dent Res Vol 98 (Spec Iss B): 0568. https://iadr.abstractarchives.com/abstract/ced-iadr2019-3222886/high-viscosity-glass-ionomer-used-with-selective-cavity-preparation-in-mih
After 2 years, EQUIA Forte presented a high survival rate in MIH affected first permanent molars. The probability of being satisfied at 12 months and 24 months were respectively 88,2%,78.6%.	
Number of Patients evaluated: 58 patients **Number of restorations: 134 restorations**	

TITLE	**Clinical performance of a glass hybrid restorative in extended size class II cavities**
REFERENCE	Gurgan S *et al.* Oper Dent. 2019. 45(3):243-254. Oct 29. doi: 10.2341/18-282-C
EQUIA Forte performed as good as the micro-hybrid composite (G-ænial Posterior), with a success rate of 100% at the 24-month recall.	
Number of Patients evaluated:37 patients **Number of restorations: 108 restorations**	

TITLE	**Clinical performance of a glass-hybrid system compared with a resin composite in the posterior region: Results of a 2-year multicenter study**
REFERENCE	Miletić I *et al.* J Adhes Dent. 2020. 22(3):235-247. doi: 10.3290/j.jad.a44547
In this split-mouth study design, EQUIA Forte performed as good as the nanohybrid resin composite (Tetric EvoCeram) in moderate to large two-surface class II restorations.	
Number of Patients evaluated: 180 patients **Number of restorations: 360 restorations**	

TITLE	**Twenty-four-month clinical performance of a glass hybrid restorative in non-carious cervical lesions of patients with bruxism: a split-mouth, randomized clinical trial**
REFERENCE	Vural U *et al.* Clin Oral Investig. 2020. 24(3):1229-1238. doi: 10.1007/s00784-019-02986-x
EQUIA Forte showed good performance for the restoration of NCCLs when compared to Ceram.X One Universal. Cumulative survival rates was 84.1%	
Number of Patients evaluated: 25 patients **Number of restorations: 148 restorations**	

References – Clinical studies

EQUIA® Forte

TITLE	**A Clinical Evaluation of Conservative approach and GIC Performance in MIH Affected Molars: Three-year Results**
REFERENCE	Tugcu N *et al.* IAPD20 Virtual. Abstract book p.1076. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://iapdworld.org/wp-content/uploads/2020/09/IAPD20-Virtual-Abstract-Book-_compressed.pdf
EQUIA Forte combined with minimal invasive cavity preparation was found to be a successful approach during a 3-year follow-up.	
Number of Patients evaluated: 31 patients **Number of restorations: 65 restorations**	

TITLE	**ART restorations in MIH severely affected molars: 4 years follow-up**
REFERENCE	Marques M *et al.* J Dent Res Vol 99 (Spec Iss A): 2384. https://iadr.abstractarchives.com/abstract/20iags-3328771/art-restorations-in-mih-severely-affected-molars-4-years-follow-up
The survival rate was 61.9% after a 48 months. EQUIA Forte is a trustable option for treating severely MIH affected teeth.	
Number of Patients evaluated: 44 patients **Number of restorations: 60 restorations**	

TITLE	**48-Month clinical performance of a glass hybrid in extended size class II cavities**
REFERENCE	Gurgan S *et al.* J Dent Res Vol 99 (Spec Iss A): 1389. https://iadr.abstractarchives.com/abstract/20iags-3327309/48-month-clinical-performance-of-a-glass-hybrid-in-extended-size-class-ii-cavities
EQUIA Forte and the micro-hybrid composite (G-ænial Posterior) presented acceptable surface and marginal adaptation characteristics, rendering the glass hybrid a trustable permanent material for large Class II cavities.	
Number of Patients evaluated: 32 patients **Number of restorations: 90 restorations**	

References – Clinical studies

EQUIA® Forte

TITLE	**Glass Hybrid Versus Nanocomposite for Restoration of Sclerotic Non-carious Cervical Lesions: 18-Month Results of a Randomized Controlled Trial**
REFERENCE	Schwendicke F *et al.* J Adhes Dent. doi: 10.3290/j.jad.b2287831
EQUIA Forte may be a suitable alternative to Filtek Supreme XTE for restoring sNCCLs, without any significant difference in survival between the materials. GH restorations required less chairtime than did placing RC restorations.	
Number of Patients evaluated: 88 patients **Number of restorations: 175 restorations**	

TITLE	**Glass hybrid versus composite for non-carious cervical lesions: Survival, restoration quality and costs in randomized controlled trial after 3 years**
REFERENCE	Schwendicke F *et al.* J Dent. 2021. 110:103689. https://doi.org/10.1016/j.jdent.2021.103689
EQUIA Forte was significantly less costly both, initially and long-term, than Filtek Supreme XTE for restoring non-carious cervical lesions. Survival was not significantly different.	
Number of Patients evaluated: 88 patients **Number of restorations: 175 restorations**	

TITLE	**Cost-effectiveness of glass hybrid versus composite in a multi-country randomized trial**
REFERENCE	Schwendicke F *et al*. J Dent. 2021. 107:103614. https://doi.org/10.1016/j.jdent.2021.103614
EQUIA Forte was less costly than Tetric EvoCeram both initially and over 3 years. Efficacy differences were extremely limited.	
Number of Patients evaluated: 180 patients **Number of restorations: 360 restorations**	

TITLE	**Long-term cost-effectiveness of glass hybrid versus composite in permanent molars**
REFERENCE	Schwendicke F *et al*. J Dent. 2021. 112:103751 https://doi.org/10.1016/j.jdent.2021.103751
This study used data provided by a multi-country randomized trial comparing EQUIA Forte to Tetric EvoCeram (Miletic *et al*, 2020) . Microsimulations models translated the data into a long-term horizon, concluding that glass-hybrid is likely a cost-effective option for restoring permanent molars.	
Number of Patients evaluated: 180 patients **Number of restorations: 360 restorations**	

References – Clinical studies

EQUIA® Forte

TITLE	**4-Years Clinical Performance of Glass-Hybrid and Composite in Multi-Center Trial**
REFERENCE	Miletic I, *et al*. 2022. J Dent Res Vol 101 (Spec Iss C): P350 https://iadr.abstractarchives.com/abstract/per-iadr2022-3787618/4-years-clinical-performance-of-glass-hybrid-and-composite-in-multi-center-trial
In this split-mouth study design, EQUIA Forte performed as good as the nanohybrid resin composite (Tetric EvoCeram) in moderate to large two-surface class II restorations.	
Number of Patients evaluated: 180 patients **Number of restorations: 360 restorations**	

TITLE	**Sixty-Month Follow-up of a Glass Hybrid in NCCLs**
REFERENCE	Gurgan S, *et al.* 2022. J Dent Res Vol 101 (Spec Iss C): P319 https://iadr.abstractarchives.com/abstract/per-iadr2022-3760534/sixty-month-follow-up-of-a-glass-hybrid-in-nccls
After 5 years, EQUIA Forte showed similar clinical performance and survival as the resin composite Ceram.X One Universal in NCCLs in patients with bruxism.	
Number of Patients evaluated:15 patients **Number of restorations: 97 restorations**	

TITLE	**Changes in oral health-related quality of life after treatment of molar incisor hypomineralisation using Glass Hybrid Restorations**
REFERENCE	Tugcu N, *et al.* 2022. J Pak Med Assoc Vol. 72 No. 10 (2022): OCTOBER DOI: https://doi.org/10.47391/JPMA.3848
Treating MIH-affected molars with EQUIA Forte after selective caries removal improved the Oral Health-related Quality of Life (OHRQOL) in children aged 11-14 years.	
Number of Patients evaluated:40 patients **Number of restorations: 86 restorations**	

References – Clinical studies

EQUIA® Forte

TITLE	**Five-Year Performance of Glass-Hybrid and Nano-Hybrid Restoratives: Multi-Centre Clinical Trial**
REFERENCE	Miletić I *et al.* J Dent Res Vol 102 (Spec Iss C): 0363 https://ced-iadr2023.com/abstract-book-2/ page 183
In this split-mouth study design, the success and survival rates of EQUIA Forte were satisfactory and comparable to those of resin composite, Tetric EvoCeram, in moderate to large two-surface restorations of permanent molars.	
Number of Patients evaluated: 180 patients **Number of restorations: 360 restorations**	

TITLE	**Clinical performance of a glass-hybrid system in comparison with a resin composite in two-surface class II restorations: a 5-year randomised multi-centre study**
REFERENCE	Miletić I *et al.* Clin Oral Investig. 2024 Jan 20;28(1):104 https://pubmed.ncbi.nlm.nih.gov/38243032/
In this split-mouth study design, EQUIA Forte and Tetric EvoCeram have demonstrated comparable satisfactory performance, suggesting that both products can be used as long-term restorative materials in the posterior region for moderate to large two-surface restorations.	
Number of Patients evaluated: 180 patients **Number of restorations: 360 restorations**	

EQUIA FORTE™ HT

TITLE	**Clinical Performance of Restorations in Teeth Affected by MIH**
REFERENCE	Kaya R, Kargul B. 2021. J Dent Res Vol 100 (Spec Iss A): 0584. *https://iadr.abstractarchives.com/abstract/21iags-3572669/clinical-performance-of-restorations-in-teeth-affected-by-mih*
EQUIA Forte HT (GH) and everX Flow were the restorative options to treat first permanent molars affected by MIH. Retention rate at 12-month was 100% for GH restoration, while marginal integrity was 89.2%. This suggests that EQUIA Forte HT is a good restorative option for MIH affected teeth.	
Number of Patients evaluated: 28 patients Number of restorations: 67 restorations	

TITLE	**Two years clinical performance of composite and hybrid ionomer for molars affected by MIH**
REFERENCE	Kaya R, Kodaman N, Kargul B. Eur Arch Paediatr Dent . 2023 Jan 16 : 1–96 doi: 10.1007/s40368-022-00771-1
EQUIA Forte HT (GH) and everX Flow were the restorative options to treat first permanent molars affected by MIH. At 24-month, retention rate was 96,8% and 93,5% for GH and resin composite respectively, suggesting that GH is a reliable restorative alternative for MIH affected teeth.	
Number of Patients evaluated: 31 patients Number of restorations: 64 restorations	

TITLE	**Could bulk fill glass hybrid restorative materials replace composite resins in treating permanent teeth? A randomized controlled clinical trial**
REFERENCE	Uyumaz FÜ, Abaklı İnci M, Özer H. J Esthet Restor Dent. 2023 Dec 18. https://pubmed.ncbi.nlm.nih.gov/38108583/ doi: 10.1111/jerd.13181. Online ahead of print.
In this split-mouth study design, EQUIA Forte HT (GH) and Charisma Smart Universal were the restorative options to treat Class I restorations in permanent molars. After 1 year, GH and resin composite demonstrated equivalent and successful performance.	
Number of Patients evaluated: 44 patients Number of restorations: 144 restorations	