



## References – Clinical studies

### EQUIA Fil®

<b>TITLE</b>	<b>Clinical performance of a new glass ionomer-based restoration system: a retrospective cohort study</b>
<b>REFERENCE</b>	Friedl K <i>et al</i> , Dent Mater. 2011 Oct;27(10):1031-7. doi: 10.1016/j.dental.2011.07.004
After 2 years, EQUIA proved to be a reliable material for permanent Class I (any size) and small class II restorations.	
Number of Patients evaluated: 43 patients Number of Restorations: 26 class I; 125 class II restorations	

<b>TITLE</b>	<b>Two-year study on the clinical performance of the glass ionomer based restorative system EQUIA</b>
<b>REFERENCE</b>	Gurgan S <i>et al</i> , J Min Interv in Dent, v. 6 (6), Jan 2013.
EQUIA showed a high clinical performance when compared to a micro-hybrid composite (Gradia Direct Posterior) in class I cavities over a 2-year follow-up.	
Number of Patients evaluated: 30 patients Number of Restorations: 60 restorations	

<b>TITLE</b>	<b>60-Month clinical performance of a glass-ionomer restorative system</b>
<b>REFERENCE</b>	Gurgan S <i>et al</i> , J Dent Res Vol 93 (Spec Iss C):89, 2014. iadr.abstractarchives.com/abstract/14iags-190266/60-month-clinical-performance-of-a-glass-ionomer-restorative-system
EQUIA performed as successfully as the micro-hybrid composite (Gradia Direct Posterior) in class I and class II restorations.	
Number of Patients evaluated: 59 patients Number of Restorations: 80 class I; 60 class II restorations	

<b>TITLE</b>	<b>One-year survival of ART and conventional restorations in patients with disability</b>
<b>REFERENCE</b>	Molina G, <i>et al</i> . BMC Oral Health. 2014 May 7;14:49. doi: 10.1186/1472-6831-14-49
The survival rates of ART and CRT restorations were 97.8% and 90.5%, respectively. ART and EQUIA survived longer than composite restorations.	
Number of Patients evaluated: 66 patients Number of Restorations: 298 restorations	



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<b>TITLE</b>	<b>One-year comparative clinical evaluation of EQUIA with resin-modified glass ionomer and a nanohybrid composite in non-carious cervical lesions</b>
<b>REFERENCE</b>	Vaid DS <i>et al</i> , J Conserv Dent. 2015 Nov-Dec;18(6):449-52. doi: 10.4103/0972-0707.168805
<b>After 1-year EQUIA performed as good as the nanohybrid composite (Tetric N-Ceram).</b>	
<b>Number of Patients evaluated: 29 patients Number of Restorations: 87 restorations</b>	

<b>TITLE</b>	<b>Four-year randomized clinical trial to evaluate the clinical performance of a glass ionomer restorative system</b>
<b>REFERENCE</b>	Gurgan S <i>et al</i> , Oper Dent. 2015 Mar-Apr;40(2):134-43. doi: 10.2341/13-239-C
<b>EQUIA performed as successfully as the micro-hybrid composite (Gradia Direct Posterior) in class I and II restorations.</b>	
<b>Number of Patients evaluated: 59 patients Number of Restorations: 80 class I; 60 class II restorations</b>	

<b>TITLE</b>	<b>Bilayer technique and nano-filled coating increase success of approximal ART restorations: a randomized clinical trial</b>
<b>REFERENCE</b>	Hesse D <i>et al</i> , Int J Paediatr Dent. 2016 May;26(3):231-9. doi: 10.1111/ipd.12194
<b>After 36 months, the survival rate of the approximal ART restorations was positively influenced by the bilayer technique.</b>	
<b>Number of Patients evaluated: 208 patients</b>	

<b>TITLE</b>	<b>Clinical performance during 48 months of two current glass ionomer restorative systems with coatings: a randomized clinical trial in the field</b>
<b>REFERENCE</b>	Klinke T <i>et al</i> . Trials. 2016 May 8;17(1):239. doi: 10.1186/s13063-016-1339-8
<b>In class II fillings, EQUIA with coating performed better, with fewer failures in all the follow-up intervals, compared to Fuji IX GP.</b>	
<b>Number of Patients evaluated: 643 patients Number of Restorations: 1006 restorations</b>	



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<b>TITLE</b>	<b>Clinical performance of a glass ionomer restorative system: a 6-year evaluation</b>
<b>REFERENCE</b>	Gurgan S <i>et al</i> , Clin Oral Investig. 2016 Dec 20. doi: 10.1007/s00784-016-2028-4
<b>EQUIA presented a high clinical performance and is a reliable choice for posterior restorations when compared to a micro-hybrid composite (Gradia Direct Posterior).</b>	
<b>Number of Patients evaluated: 59 patients Number of Restorations: 80 class I; 60 class II restorations</b>	

<b>TITLE</b>	<b>A prospective six-year clinical study evaluating reinforced glass ionomer cements with resin coating on posterior teeth: quo vadis?</b>
<b>REFERENCE</b>	Türkün S <i>et al</i> , Oper Dent. 2016 Nov/Dec;41(6):587-598. doi.org/10.2341/15-331-C
<b>The overall clinical performance of EQUIA after 6 years was excellent when compared to Riva SC, including in large posterior Class II restorations.</b>	
<b>Number of Patients evaluated: 54 patients Number of Restorations: 256 restorations</b>	

<b>TITLE</b>	<b>7 Years, multicenter, clinical evaluation on 154 permanent restorations made with a glass ionomer-based restorative system</b>
<b>REFERENCE</b>	Basso M <i>et al</i> , J Dent Res Vol 95 (Spec Iss B): 0446. 2016. doi: 10.13140/RG.2.1.1603.2249
<b>EQUIA is a trustable option for class I, II and V restorations, including load bearing tooth surfaces of molars and premolars.</b>	
<b>Number of Patients evaluated: 124 patients Number of Restorations: 154 restorations</b>	

<b>TITLE</b>	<b>Clinical performance of heat-cured high-viscosity glass ionomer class II restorations in primary molars: A preliminary study</b>
<b>REFERENCE</b>	Tal E <i>et al</i> , J Clin Pediatr Dent. 2017;41(4):264-270. doi: 10.17796/1053-4628-41.4.264
<b>After 22 months, 97% of the restorations were rated optimal for marginal integrity and no staining of the restoration surfaces was recorded. None of the patients complained of post-operative sensitivity.</b>	
<b>Number of Patients evaluated: 44 patients Number of Restorations: 93 restorations</b>	



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<b>TITLE</b>	<b>A randomized, controlled, split-mouth trial evaluating the clinical performance of high-viscosity glass-ionomer restorations in noncarious cervical lesions: Two-year results</b>
<b>REFERENCE</b>	Çelik U <i>et al</i> , J Adhes Dent. 2018;20(4):299-305. doi:10.3290/j.jad.a40985
<b>EQUIA performed well when compared to a nanohybrid composite (G-ænial), with a retention rate of 91%.</b>	
<b>Number of Restorations: 134 restorations</b>	

<b>TITLE</b>	<b>Randomized clinical trial of ART class II restorations using two glass ionomer cements: One-year follow-up</b>
<b>REFERENCE</b>	de França CMC <i>et al</i> , Pediatr Dent. 2018 Mar 15;40(2):98-104
<b>Class II ART restorations with EQUIA showed higher survival rates compared to those with glass carbomer. The overall success rates for EQUIA was 86% while for GP Glass Fill it was 56%.</b>	
<b>Number of Patients evaluated: 33 patients Number of Restorations: 59 restorations</b>	

<b>TITLE</b>	<b>Three-year survival of ART high-viscosity glass-ionomer and resin composite restorations in people with disability</b>
<b>REFERENCE</b>	Molina F <i>et al</i> , Clin Oral Inv. 2018 Jan;22(1):461-467. doi: 10.1007/s00784-017-2134-y
<b>The cumulative survival rates for the 182 ART and EQUIA and 116 CRT and Filtek-Z250 restorations were 94.8 ± 2.1 and 82.8 ± 5.3%, respectively.</b>	
<b>Number of Patients evaluated: 66 patients Number of Restorations: 298 restorations</b>	

<b>TITLE</b>	<b>Clinical evaluation of micro-hybrid composite and glass ionomer restorative material in permanent teeth</b>
<b>REFERENCE</b>	Kharm K <i>et al</i> , J Contemp Dent Pract. 2018 Feb 1;19(2):226-232 doi: 10.5005/jp-journals-10024-2241
<b>After 9 months, this split-mouth study design showed that EQUIA is a trustable alternative to micro-hybrid composite (Amelogen Plus) for class I cavities in permanent teeth.</b>	
<b>Number of Patients evaluated: 12 patients Number of Restorations: 40 restorations</b>	



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<b>TITLE</b>	<b>Glass carbomer and compomer for ART restorations: 3-year results of a randomized clinical trial</b>
<b>REFERENCE</b>	Olegário C <i>et al</i> , Clin Oral Investig. 2019 Apr;23(4):1761-1770. doi: 10.1007/s00784-018-2593-9
<b>The survival rates of EQUIA were 83% (Class I) and 56% (Class II). EQUIA performed as good as compomer in ART restorations in primary molars.</b>	
<b>Number of Patients evaluated: 568 patients Number of Restorations: 274 Class I ; 284 Class II restorations</b>	

<b>TITLE</b>	<b>Randomized clinical trial of class II restoration in permanent teeth comparing ART with composite resin after 12 months</b>
<b>REFERENCE</b>	Menezes-Silva R <i>et al</i> , Clin Oral Investig. 2019 Jan 6. doi: 10.1007/s00784-018-2787-1
<b>EQUIA performed as good as the composite (Filtek-Z350), with a success rate of 95.8%.</b>	
<b>Number of Patients evaluated: 154 patients Number of Restorations: 154 restorations</b>	

<b>TITLE</b>	<b>Three-year clinical evaluation of high-viscosity glass ionomer restorations in non-carious cervical lesions: a randomized controlled split-mouth clinical trial</b>
<b>REFERENCE</b>	Celik U <i>et al</i> , Clin Oral Investig. 2019 Mar;23(3):1473-1480. doi: 10.1007/s00784-018-2575-y
<b>The 3-year clinical performance of EQUIA restorations in non-retentive lesions was satisfactory.</b>	
<b>Number of Patients evaluated: 22 patients Number of Restorations: 134 restorations</b>	

<b>TITLE</b>	<b>Long-term clinical performance of heat-cured high-viscosity glass ionomer class II restorations versus resin-based composites in primary molars: a randomized comparison trial</b>
<b>REFERENCE</b>	Kupietzky A <i>et al</i> , Eur Arch Pediatric Dent. 2019 Feb 28. doi: 10.1007/s40368-019-00423-x
<b>EQUIA performed as good as the composite (Filtek P-60) and is a trustable option for proximal lesions in primary molars, with 83% of the restorations functioning up to 36 months.</b>	
<b>Number of Patients evaluated: 45 patients Number of Restorations: 70 restorations</b>	



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<b>TITLE</b>	<b>Randomized clinical trial evaluating proximal retentions on ART restorations</b>
<b>REFERENCE</b>	Lopez L <i>et al</i> , J Dent Res Vol 98 (Spec Iss A):2120 <a href="https://iadr2019.zerista.com/event/member/584705">https://iadr2019.zerista.com/event/member/584705</a>
<b>After 24 months, class II restorations presented high success rates. Proximal retentive grooves affected positively the success of the treatment.</b>	
<b>Number of Patients evaluated: 187 patients Number of Restorations: 293 restorations</b>	

<b>TITLE</b>	<b>Three-year randomized clinical trial evaluating ART and composite resin restorations</b>
<b>REFERENCE</b>	Menezes-silva I, <i>et al</i> , J Dent Res Vol 98 (Spec Iss A):3732 <a href="https://iadr2019.zerista.com/event/member/582959">https://iadr2019.zerista.com/event/member/582959</a>
<b>ART and EQUIA restorations performed as successfully as composite (Filtek-Z350) in Class II restorations.</b>	
<b>Number of Patients evaluated: 154 patients Number of Restorations: 154 restorations</b>	

<b>TITLE</b>	<b>Five-year follow-up of ART and CRT in patients with disability</b>
<b>REFERENCE</b>	Molina G <i>et al</i> , J Dent Res Vol 98 (Spec Iss A): 1357, <a href="https://iadr2019.zerista.com/event/member/583146">https://iadr2019.zerista.com/event/member/583146</a>
<b>Survival probability percentages were significantly higher for ART-GIC (EQUIA or Chemfil Rock) (90.2%) than for CRT- Composite (Filtek Z350) restorations (82.8%) after 5 years.</b>	
<b>Number of Patients evaluated: 66 patients Number of restorations: 298 restorations</b>	

<b>TITLE</b>	<b>A randomized controlled 10 years follow-up of a glass ionomer restorative material in class I and class II cavities</b>
<b>REFERENCE</b>	Gurgan S <i>et al</i> , J Dent. 2020 Mar;94:103175. doi: 10.1016/j.jdent.2019.07.013
<b>During the 10-year follow-up EQUIA showed an outstanding performance, comparable to the micro-hybrid composite (Gradia Direct Posterior). Success rates of Class I and II EQUIA restorations were 100%.</b>	
<b>Number of Patients evaluated: 59 patients Number of Restorations: 80 Class I; 60 Class II restorations</b>	



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<b>TITLE</b>	<b>High-viscosity glass-ionomer vs. composite resin restorations in persons with disability: Five-year follow-up of clinical trial</b>
<b>REFERENCE</b>	Molina G <i>et al</i> , J. Braz. Oral Res. 2019;33:e099 <a href="https://doi.org/10.1590/1807-3107bor-2019.vol33.0099">https://doi.org/10.1590/1807-3107bor-2019.vol33.0099</a>
<b>ART and GIC (EQUIA or Chemfil Rock) method had higher longevity than conventional composite (Filtek-Z350).</b>	
<b>Number of Patients evaluated: 66 patients Number of Restorations: 298 restorations</b>	

<b>TITLE</b>	<b>A 3-year controlled randomized clinical study on the performance of two glass ionomer cements in Class II cavities of permanent teeth</b>
<b>REFERENCE</b>	Fotiadou C <i>et al</i> . Quintessence Int. 2019;50(8):592-602. doi: 10.3290/j.qi.a42692
<b>EQUIA Fil and Fuji IX GP Fast performed similarly in Class II cavities in adult patients, exhibiting an overall survival rate of 89.3% and 88.0% respectively.</b>	
<b>Number of Patients evaluated: 34 patients Number of Restorations: 85 restorations</b>	

<b>TITLE</b>	<b>Randomized clinical trial evaluating proximal retentions on ART restorations</b>
<b>REFERENCE</b>	Lopez L M <i>et al</i> , J Dent Res Vol 99 (Spec Iss A): 1523, <a href="https://iadr2020.zerista.com/event/member/678688">https://iadr2020.zerista.com/event/member/678688</a>
<b>Success rates of EQUIA after 6 and 36 months without retentions: 90.3% and 51.6%; with retention: 95.9% and 61.0%, respectively.</b>	
<b>Number of Patients evaluated: 187 patients Number of Restorations: 293 Class II restorations</b>	

<b>TITLE</b>	<b>Randomized clinical trial evaluating proximal retentions on Class II ART restorations</b>
<b>REFERENCE</b>	Gonçalves P <i>et al</i> , J Dent Res Vol 99 (Spec Iss A): 1525, <a href="https://iadr2020.zerista.com/event/member/678690">https://iadr2020.zerista.com/event/member/678690</a>
<b>Class II ART and EQUIA restorations with proximal retention grooves presented similar survival rates to non-grooves restorations. Success rates after 6, 12 and 24 months were 96%, 88% and 66% for group with retention and 97%, 89% and 71%, for non-retention group.</b>	
<b>Number of Patients evaluated: 183 patients Number of Restorations: 300 Class II restorations</b>	



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<b>TITLE</b>	<b>Three-year survival of class II restorations using two restorative materials</b>
<b>REFERENCE</b>	Molina G <i>et al</i> , J Dent Res Vol 99 (Spec Iss A): 1385, <a href="https://iadr2020.zerista.com/event/member/678007">https://iadr2020.zerista.com/event/member/678007</a>
<b>Class II restorations with ART and EQUIA presented the same 3-year cumulative survival percentages as the traditional method using composite (Filtek-Z250).</b>	
<b>Number of Patients evaluated: 85 patients</b> <b>Number of Restorations: 169 restorations</b>	