20th EUROPEAN AIDS CONFERENCE
15-18 October 2025 | Paris, France

EACS European AIDS Clinical Society

Integrase Resistance Mutations in Treatment-Naive Persons with Advanced Immunodeficiency Initiating Dual Therapy with Dolutegravir and Lamivudine

M. Figueroa , C. Brites , D. Cecchini , A. Ramalho , J.L Francos , M. Lacerda , M.J Rolon , J. Valdez Madruga , E. Sprintz , D. Converso , G. Miernes , T. Newman Lobato Souza , P. Parenti , O. Sued , P. Cahn

Fundacion Huesped, Ciudad de Buenos Aires, Argentina, Fundação Bahiana de Infectologia, Salvador ,Bahia, Brazil, Universidade Federal da Bahia/EBSERH, Salvadorb Bahia, Brazil, Hospital General de Agudos Dr. Cosme Argerich, Ciudad de Buenos Aires, Argentina, Hospital Geral de Noval guaçu, Nova Iguaçu, Rio de Janeiro, Brazil, Hospital de Infecciosas Francisco Javier Muñiz, Ciudad de Buenos Aires, Argentina, Fundação de Medicina Tropical do Amazonas, Manaus, Brazil, Hospital Juan A Fernandez, Ciudad de Buenos Aires, Argentina, Centro de Referência e Treinamento DSTAIDS, Sao Paulo, Brazil, Hospital de Clínicas de Porto Alegre, Porto Alegre, Brazil, Instituto de Infectologia Emílio Ribas, San Pablo, Brazil, Instituo CAICI, Rosario,Santa Fe, Argentina

PURPOSE

Integrase and/or Nucleoside Reverse Transcriptase Inhibitor (NRTI) resistance mutations in treatment-naive individuals may impact the efficacy of dolutegravir/lamivudine (DTG/3TC). This study assessed the prevalence of baseline integrase mutations and their association with virologic outcomes in severely immunocompromised individuals initiating DTG/3TC dual therapy.

METHODS

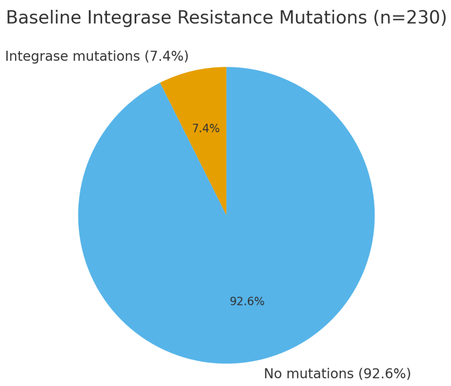
- The DOLCE study enrolled treatment-naive, HIV-positive individuals with advanced disease (CD4 count less than 200 cells/mm) who initiated DTG/3TC (DT) or DTG plus TDF/XTC (TT), randomized 2:1, between 2021 and 2023 in Argentina and Brazil. Virological suppression rates were similar among DT and TT initiators.
- Genotypic resistance testing was performed at screening; results were unavailable at treatment initiation. Mutations were classified per IAS-USA guidelines.
- Protocol- defined exclusionary mutations were G118R, Q148H/K/R, R263K (integrase), and M184V/I (NRTI). Logistic regression evaluated associations between integrase mutations and virologic efficacy.

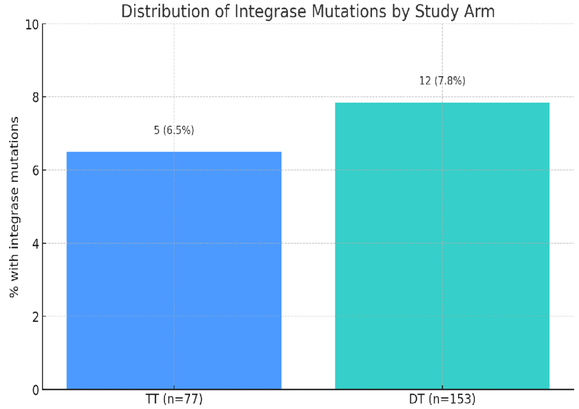
CONCLUSIONS

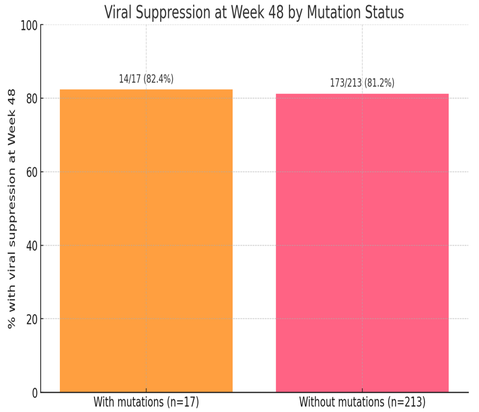
Baseline integrase mutations, mostly accessory or polymorphic, were uncommon and did not impact virologic outcomes.
We didn't find an association between virological failure and baseline resistance mutations.
These findings suggest that routine baseline integrase resistance testing may not be necessary before starting DTG/3TC dual therapy in this population with advanced disease.

RESULTS

- *Among **230** randomized participants, 17 (7.4%) had accessory or polymorphic integrase mutations at baseline: 5 (6.5%) in TT and 12 (7.8%) in DT.*
- *No major or exclusionary defined by protocol integrase mutations were detected. Variants included G163R, G163K, G163GR, E157EQ, Q146QK, Q95K, D232N, T97A, and E157Q.*
- *One DT participant harbored the M184V mutation (0.43%).*
- *At week 48, 14/17 participants with baseline integrase mutations (82.4%; 95% CI: 56–95)achieved viral suppression, similar to 173/213 without integrase mutations (81.2%; 95% CI: 76–96).*
- *Three participants with integrase mutations experienced protocol-defined virologic failure (63, 114, 94 copies/mL); all were in DT, with high baseline viral loads and good adherence.*
- *The participant with the M184V mutation achieved sustained virologic suppression. No significant differences in efficacy were observed based on baseline integrase mutations after adjusting for viral load, CD4 count, and HIV-1 subtype (p = 0.8)*







ACKNOWLEDGEMENTS

We gratefully acknowledge the contributions of the study teams in Brazil and Argentina, and all participants, whose involvement made this research possible.
This investigator-initiated study was supported by ViiV Healthcare.

REFERENCES

1-Figueroa MI, Brites C, Cecchini D, Ramalho A, Francos JL, Lacerda M, Rolon MJ, Valdez Madruga J, Sprinz E, Lobato Souza TN, Parenti P, Converso D, Mernies G, Sued O, Cahn P; DOLCE study group. Efficacy and safety of dual therapy with dolutegravir/lamivudine in treatment-naive persons with CD4 counts <200/mm³: 48-week results of the DOLCE study. Clin Infect Dis. 2025; ciaf415. doi:10.1093/cid/ciaf415.

CONTACT INFORMATION

maria.figueroa@huesped.org.ar

Disclaimer

This content was acquired following an unsolicited medical information enquiry by a healthcare professional. Always consult the product information for your country, before prescribing a ViiV medicine. ViiV does not recommend the use of our medicines outside the terms of their license. In some cases, the scientific Information requested and downloaded may relate to the use of our medicine(s) outside of their license.