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### Superinfection with drug-resistant HIV is rare and does not contribute substantially to therapy failure in a large European cohort

Bartha, I.; Assel, M.; Sloot, P.M.A.; Zazzi, M.; Torti, C.; Schülter, E.; De Luca, A.; Sönnnerborg, A.; Abecasis, A.B.; Van Laethem, K.; Rosi, A.; Svärd, J.; Paredes, R.; van de Vijver, D.A.M.C.; Vandamme, A.-M.; Müller, V.

**DOI**

[10.1186/1471-2334-13-537](https://doi.org/10.1186/1471-2334-13-537)

**Publication date**

2013

**Document Version**

Final published version

**Published in**

BMC Infectious Diseases

[Link to publication](#)

**Citation for published version (APA):**

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## Preliminary analysis

4425 patients' routinely collected *pol* sequences analyzed with RAxML  
100 randomly initialized ML tree built on 13816 sequences

303 positive cases

100 negative cases

MrBayes+BLAST

MrBayes+BLAST

3 confirmed  
(3% false negative rate)

**Calibration to Final analysis** Comparing RAxML+BLAST vs MrBayes+BLAST on **170** patients and calibrating size of background sequence set

## Final analysis

RAxML+BLAST

107 putative superinfection cases

94 closely related non monophyletic cases

## Validation by sequencing

Fresh sample amplification and sequencing of *pol* and *env* genes in **14 putative superinfection** cases

2 confirmed superinfection cases  
9 sample mixups  
2 monophyletic trees based on *env* only  
1 cluster of closely related sequences