

Poster presentation

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Development and evaluation of the oligonucleotide ligation assay (OLA) for the detection of drug resistance mutations in HIV-2 patients on antiretroviral therapy

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Background

The naturally resistance of HIV-2 to non-nucleoside reverse transcriptase inhibitors and T-20, as well as its reduced susceptibility to some protease inhibitors makes the nucleoside reverse transcriptase inhibitors (NRTI) crucial in HIV-2 therapy. Hence, early detection of resistance mutations to NRTI is important to explain treatment failures and to guide therapy.

Materials and methods

HIV-2 OLA was developed for the Q151M and M184V mutations using a set of 3 oligonucleotide probes for each mutation. 90 HIV-2 samples from Guinea Bissau, the Gambia and Sweden were amplified, sequenced and evaluated in OLA.

Results

OLA sensitivity was 100% for Q151M and 98% for M184V. Concordance between sequencing and OLA was 99% and 97% for the Q151M and M184V mutations respectively.

Conclusion

OLA was successfully developed for major HIV-2 mutations. Its ease-of-use, economical nature and high con-

cordance with sequencing makes it more appropriate for use in resource-poor settings.