# tance after short-course HAART compared with zidovudine/single-dose nevirapine used for prevention of HIV-1 mother-to-child transmission.

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## Abstract

**BACKGROUND:**

Antiretroviral resistance after short-course regimens used to prevent mother-to-child transmission has consequences for later treatment. Directly comparing the prevalence of resistance after short-course regimens of highly active antiretroviral therapy (HAART) and zidovudine plus single-dose nevirapine (ZDV/sdNVP) will provide critical information when assessing the relative merits of these antiretroviral interventions.

**METHODS:**

In a clinical trial in Kenya, pregnant women were randomized to receive either ZDV/sdNVP or a short-course of HAART through 6 months of breastfeeding. Plasma samples were collected 3-12 months after treatment cessation, and resistance to reverse transcriptase inhibitors was assessed using both a sequencing assay and highly sensitive allele-specific polymerase chain reaction assays.

**RESULTS:**

No mutations associated with resistance were detectable by sequencing in either the ZDV/sdNVP or HAART arms at 3 months posttreatment, indicating that resistant viruses were not present in >20% of virus. Using allele-specific polymerase chain reaction assays for K103N and Y181C, we detected low levels of resistant virus in 75% of women treated with ZDV/sdNVP and only 18% of women treated with HAART (P = 0.007). Y181C was more prevalent than K103N at 3 months and showed little evidence of decay by 12 months.

**CONCLUSIONS:**

Our finding provides evidence that compared with ZDV/sdNVP, HAART reduces but does not eliminate nevirapine resistance.