

# **Prevalence of HIV-1 Transmitted Drug Resistance in Treatment-naïve HIV-infected VCT Clients in Southern Taiwan, 2013-2014**

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## **Background/Objective**

Rate of transmitted drug resistance (TDR) strains was influenced by duration of infection, selection of study populations and government policy of treatment. The aim of this study was to monitor the prevalence of TDR in Taiwan, where free highly active antiretroviral therapy (HAART) was provided since 1997.

## **Method**

A cross sectional study on TDR was conducted in antiretroviral therapy -naïve HIV-1 – infected voluntary counseling and testing (VCT) clients from 2013 to 2014 in Southern Taiwan. Genotypic drug resistance mutations to pol gene were determined by ViroSeq™ system. HIV coreceptor tropism and integrase inhibitor resistance were measured by in house PCR and sequencing.

## **Result**

From 2013 to 2014, a total of 8653 clients received a VCT. The positive rate for HIV-1 infection was 2.7%. Sequences were obtained from 125 individuals, of whom 94% were infected by MSM. Subtype B HIV-1 strains were found in 98% of the individuals. The rates of resistance to NRTI were 5.2%, NNRTI 11.3% and no any PI or integrase inhibitor resistance was found. The most common NRTI resistance associated mutation was M184V (0.9%). The most common NNRTI resistance associated mutation was K103N (0.9%) and V179D (5.2%). HIV-1 coreceptor tropism revealed only 65% (74/114) of the individuals had CCR5-tropic virus. There was no association between TDR and risk factor for HIV-1 acquisition, CD4, viral load or other concurrent infections.

## **Conclusion**

NNRTI-related TDR of VCT clients with HIV-1 subtype B virus became the main TDR among MSM in southern Taiwan. Intervention efforts should be strengthened to prevent further transmission of HIV in the community.