

# Trends and outcome of HIV-positive patients with late presentation for combination antiretroviral therapy in Taiwan: a cohort study

Jun-Yu Zhang<sup>1</sup>, Pei-Ying Wu<sup>1</sup>, Shang-Ping Yang<sup>1</sup>, Yu-Zhen Luo<sup>1</sup>, Wen-Chun Liu<sup>2</sup>, Sui-Yuan Chang<sup>3</sup>, Chien-Ching Hung<sup>2</sup>

<sup>1</sup>Center of Infection Control, National Taiwan University Hospital, Taipei; Departments of <sup>2</sup>Internal Medicine, <sup>3</sup>Laboratory Medicine, National Taiwan University Hospital and National Taiwan University College of Medicine, Taipei, Taiwan

## Objectives

We aimed to assess the trends of late presentation for combination antiretroviral therapy (cART) and evaluate its impact on treatment response to cART in Taiwan, where nationwide access to free-of-charge cART and CD4 and plasma HIV RNA load (PVL) monitoring is provided.

## Study aims

- To assess the trends of patients who started cART with CD4<200 cells/mm<sup>3</sup> (late presenters) in Taiwan.
- To describe the pre-treatment drug resistance of HIV-1 isolates from late- vs non-late-presenters.
- To investigate the outcome of patients who presented late for cART.

## Methods

- Study duration: 2012/6/1-2015/3/31
- Subjects: HIV-infected patients, aged 18 years or older, who initiated cART
- Study site: National Taiwan University Hospital (NTUH)
- Data collected using excel
  - Demographics
  - Clinical data: WBC, hemoglobin, RPR, HBsAg, anti-HCV, CD4 count and PVL at baseline and during follow-up
  - Types of cART initiated
  - Pre-treatment drug resistance

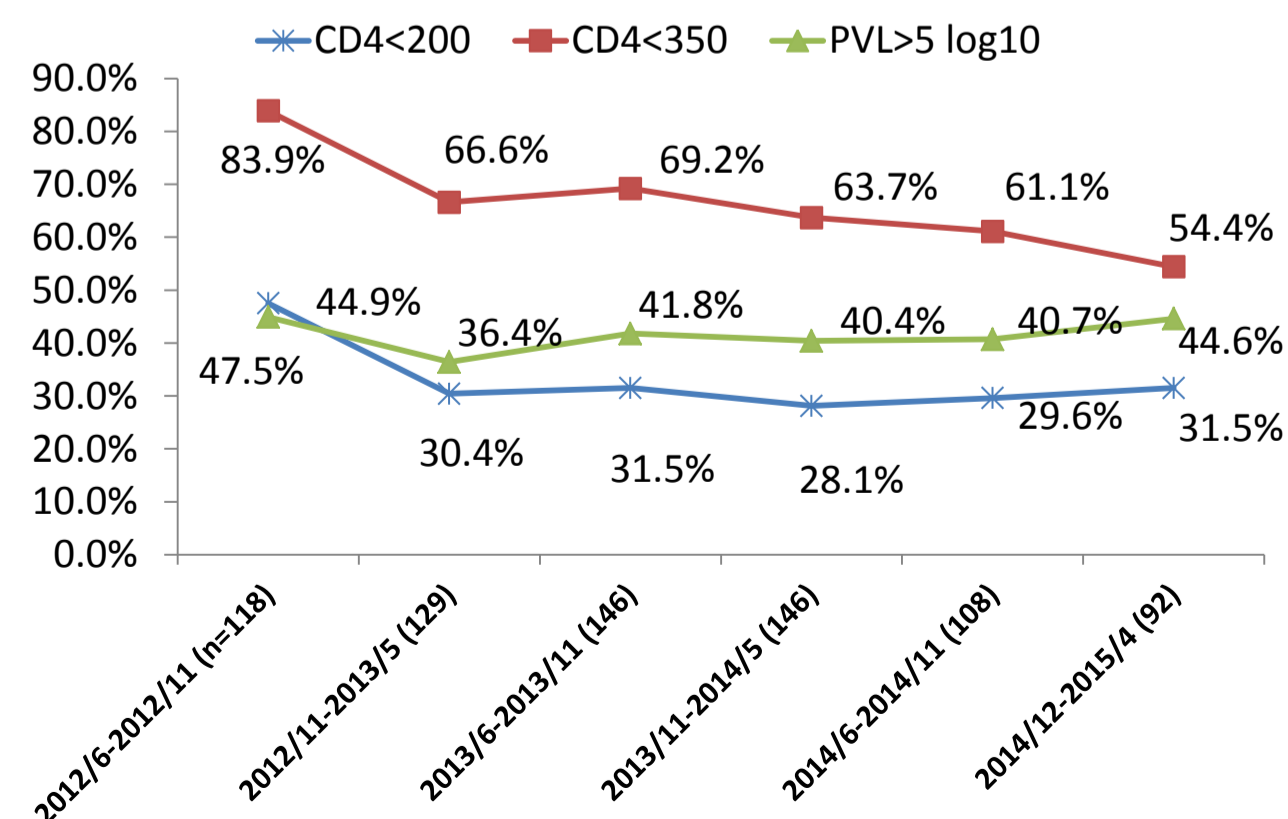


Figure 1. Trends of late presentation for cART

## Results

- The baseline characteristics of 754 HIV-positive patients are shown in **Table 1**.
- Trends of PVL and CD4 for late presenters and non-late presenters are shown in **Figure 1**.
- The data of genotypic resistance of HIV-1 to four classes of antiretroviral agents shown in **Figure 2**.
- The data of Virological and immunological responses in **Figure 3**.
- The data of Clinical outcome of patients on cART in **Figure 4**.

## Conclusions

In Taiwan, the proportion of HIV-positive patients who presented late for cART remains at about 30% at this university hospital. Late presenters have more unfavorable clinical and virological characteristics that might contribute to the increased probability of switching cART and mortality once cART was begun.

Figure 2 . Pre-treatment drug resistance of HIV-1 among late vs non-late presenters

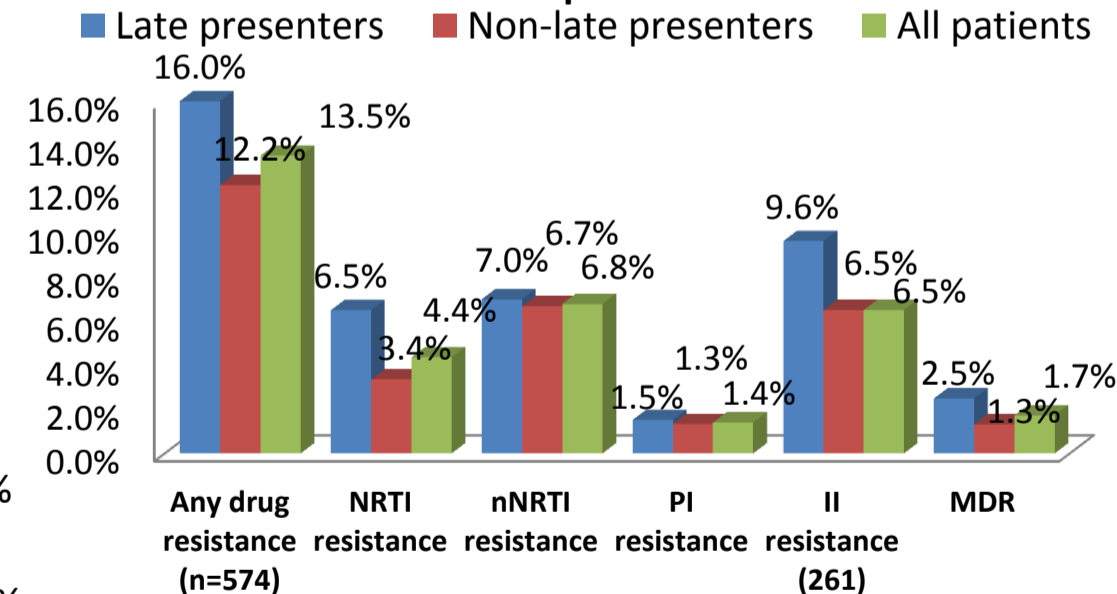


Figure 3 . Virological and immunological responses

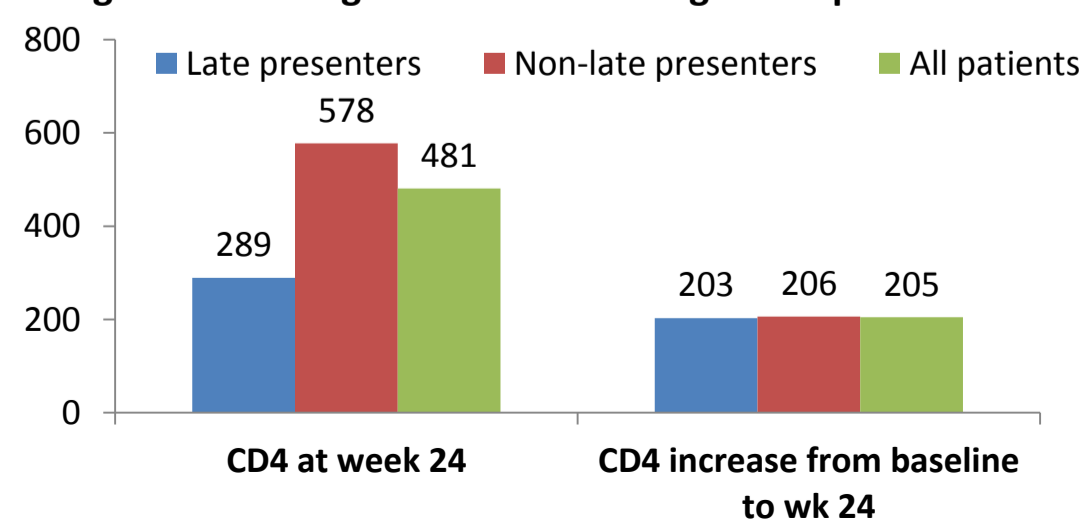


Table 1. Characteristics of HIV-positive patients initiating cART

Variable	Late presenters (CD4<200)	Non-late presenters (CD4≥200)	All	Statistics
Patient number, n (%)	247	507	754	-
Age, mean (SD), years	36.8 (10.4)	30.87 (8.0)	32.8 (9.3)	<.0001
MSM, n (%)	221 (89.5)	484 (95.5)	705 (93.5)	0.009
HBsAg-positive n= 726	34 (14.2)	38 (7.8)	72 (9.9)	0.007
Anti-HCV-positive	11 (4.5)	20 (4.1)	31 (4.3)	0.78
CD4 at initiation of cART, mean (SD), cells/mm <sup>3</sup>	83.8 (61.7)	379.2 (140.9)	282.4 (183.9)	<.0001
PVL at initiation of cART, mean (SD), log <sub>10</sub> copies/ml	5.3 (0.7)	4.7 (0.7)	4.9 (0.8)	<.0001
Opportunistic illness, n (%)	111 (44.9)	8 (1.6)	119 (15.8)	<.0001
Number of patients completing 24 weeks of follow-up, n (%)	172 (69.6)	342 (67.4)	514 (68.1)	0.54

Figure 4 . Clinical outcome of patients on cART

