

Apers L, Koole O, Manirankunda L, Lynen L, Florence E  
Institute of Tropical Medicine (ITM), Antwerp, Belgium

## Objective

To quantify the proportion of patients that presented late at the HIV/STI clinic in Antwerp over the period 1997-2010 and to document the risk factors for late presentation as a consequence of late testing, over the last two years.

## Methods

A retrospective analysis of the database of the HIV patients in follow-up at the clinic since 1997 was performed.

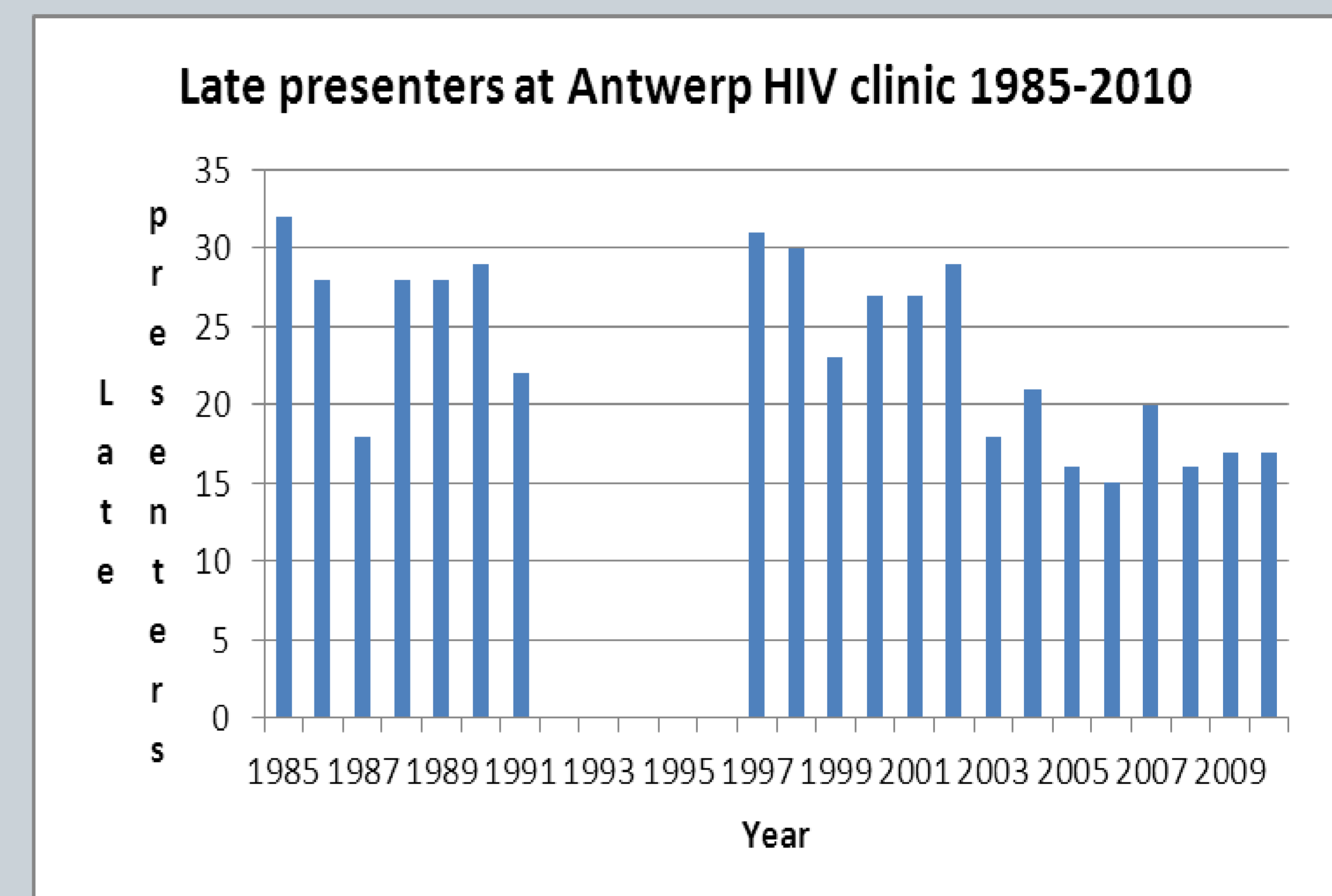
To study risk factors for late presentation a prospective case control study was used. A case was defined as a patient who was diagnosed at our clinic with a CD4 lymphocyte count of less than 200/mm<sup>3</sup>.

All participants were subjected to an anonymous structured questionnaire.

## Results

On average, 21.9% (range: 15%-30.8%) of the total annual number of new patients presented late, with a significant decreasing trend over the past 14 years ( $p < 0.001$ ).

In 2009-2010, 42 cases and 59 controls were selected. In multivariable analysis, being heterosexual (AOR: 6.6 [95% CI: 2.5-17.2],  $p < 0.001$ ) and having complaints (AOR: 5.1 [95% CI: 1.9-13.6],  $p = 0.001$ ) were independent risk factors for late diagnosis. Nationality was not withheld in the final model ( $p = 0.100$ ), however non-African (AOR: 2.7 [95% CI: 0.9-8.6] and African migrants (AOR: 3.2 [95% CI: 0.9-11.9]) tended to present late compared to residents.



Missing figures because of unreliable recording system from 1992 to 1996

Risk factor	Cases (n=42)	Controls (n=59)	Crude OR (95% CI)	P-value	Adjusted OR (95% CI)	P-value
<b>Gender</b>						
Male	35 (83.3)	51 (86.4)	1			
Female	7 (16.7)	8 (13.6)	1.28 (0.4-3.8)	0.666		
<b>Nationality</b>				0.006†	/	NS
Belgian	15 (35.7)	39 (66.1)	1			
Non-Belgian, non-African	12 (28.6)	12 (20.3)	2.6 (1.0-7.0)			
Non-Belgian, African	15 (35.7)	8 (13.6)	4.9 (1.7-13.9)			
<b>Age at HIV diagnosis</b>						
< 35 years	17 (40.5)	28 (49.1)	1.4 (0.6-3.2)	0.394		
≥ 35 years	25 (59.5)	29 (50.9)	1			
<b>Civil status</b>						
Single/divorced	19 (45.2)	34 (57.6)	1			
Married/cohabitating	23 (54.8)	25 (42.4)	1.6 (0.7-3.7)	0.220		
<b>Education</b>				0.413†		
Primary	4 (9.5)	7 (11.9)	0.6 (0.2-1.3)			
Secondary	19 (45.2)	33 (55.9)	0.6 (0.1-2.3)			
Higher/University	19 (45.2)	19 (32.2)	1			
<b>Sexual preference</b>						
Heterosexual	27 (64.3)	14 (23.7)	5.8 (2.4-13.8)	<0.001	6.6 (2.5-17.2)	<0.001
Homosexual/Bisexual	15 (35.7)	45 (76.3)	1			
<b>Profession</b>				0.420†		
Asylum seeker	7 (16.7)	4 (6.8)	0.9 (0.3-2.5)			
Without employment	8 (19.1)	13 (22.0)	2.6 (0.7-9.9)			
Employment	26 (61.9)	39 (66.1)	1			
Other (retired or student)	1 (2.4)	3 (5.1)	0.5 (0.1-5.1)			
<b>Insurance</b>				0.401†		
Complete	31 (73.8)	50 (84.8)	1			
High risk only	6 (14.3)	5 (8.5)	1.9 (0.5-6.9)			
None	5 (11.9)	4 (6.8)	2.0 (0.5-8.1)			
<b>General practitioner</b>						
Yes	25 (59.5)	49 (83.1)	1			
No	17 (40.5)	10 (16.9)	3.3 (1.3-8.3)	0.010	/	NS
<b>Contact with HCW</b>						
Yes	24 (57.1)	31 (52.5)	1.2 (0.5-2.7)			
No	18 (42.9)	28 (47.5)	1	0.647		
<b>Complaints at HIV diagnosis</b>						
Yes	32 (76.2)	25 (42.4)	4.3 (1.8-10.5)	0.001	5.1 (1.9-13.6)	0.001
No	10 (23.8)	34 (57.6)	1			
<b>Complaints in the year prior to diagnosis without contact</b>						
Yes	11 (26.2)	8 (13.6)	2.3 (0.8-6.2)	0.115	/	NS
No	31 (73.8)	51 (86.4)	1			

NS: non-significant

\* Risk factors with  $p$ -value  $< 0.20$  during univariable analysis were considered for inclusion in the multivariable model.

†  $P$ -value obtained from likelihood-ratio test.

## Conclusions

Although we observed a significant decrease in the number of patients that presented late over more than a decade at our clinic, the statistically significant risk factors for being diagnosed late (being heterosexual, migrant, and having complaints), remain fairly constant. More efforts are needed to promote testing in those risk groups.