# Previous sexually transmitted infection among young men who have sex with men as a determinant for earlier HIV diagnosis in Catalonia

N Vives<sup>1,2</sup>, R Lugo<sup>1,2</sup>, P García de Olalla<sup>3,2</sup>, M Company<sup>4</sup>, P Pons<sup>5</sup>, J Casabona<sup>1,2</sup> and the Catalonia HIV and STI Surveillance Group

<sup>1</sup>Centre for Epidemiological Studies on HIV/STI in Catalonia (CEEISCAT), Institut Catala d'Oncologia (ICO), Agencia de Salut Publica de Catalunya (ASPC); <sup>2</sup>Ciber de Epidemiología y Salud Pública (CIBERESP); Epidemiological service of Public Health Agency of Barcelona; Epidemiological Surveillance Unit of Tarragona.

The Catalonia HIV and STI Surveillance Group: R Muñoz (Centre for Epidemiological Studies on STI/HIV/AIDS in Catalonia), R Clos, J Caylà (Epidemiological service of Public Health Agency of Barcelona), N Camps (Epidemiological Surveillance Unit of Tarragona), V Humet (Penitentiary and Rehabilitation Service, Department of Justice), J Ferras (Epidemiological Surveillance Unit of Tarragona), V Humet (Penitentiary and Rehabilitation Service, Department of Justice), J Ferras (Epidemiological Surveillance Unit of Leida), J Álvarez (Epidemiological Surveillance Unit of Barcelonès Nord i Maresme), I Barrabeig (Epidemiological Surveillance Unit of Costa de Ponent), MR Sala (Epidemiological Surveillance Unit of Vallès Occidental i Vallès Oriental) and R Torra (Epidemiological Surveillance Unit Catalunya Central).

#### INTRODUCTION

Decreasing the late HIV presentation is a public health priority in Catalonia. Although men who have sex with men (MSM) seem to be at lower risk for late presentation, the reasons for the early utilisation of HIV care and diagnosis is unknown in our setting

### **OBJECTIVES**

The aim of this study was to identify determinant factors for early diagnosis and presentation to care among HIV-positive MSM in Catalonia (Spain) during the period of 2011 to 2013

## METHODS

Men older than 13 years of age, MSM and with available information on CD4 cell count, notified between January 2011 and December 2013 to the HIV/AIDS Mandatory Notification Surveillance System were selected for this analysis.

Bivariate analysis of early presentation (CD4 count > 350 cell/µl) included: age, origin, absolute CD4 T cell counts and disclosure of previous sexually transmitted infection (STI) in the last 12 months, as a proxy for sexual risk behaviour.

Factors associated with early presentation were assessed using multivariate logistic regression models.

### RESULTS

A total of 1274 MSM HIV cases were reported during 2011-2013, from which 1130 (89%) had complete CD4 T cell counts data and 63% were early presenters of HIV infection, without changes over time. Early HIV presentation was independently associated with younger age at diagnosis (OR: 4.56; 95%CI: 1.92-10.80), being born in Spain (OR: 1.41; 95%CI: 1.06-1.89), and being diagnosed with an STI in the previous 12 months of diagnosis (OR: 1.48; 95%CI: 1.06-2.06)

Table 1 . Characteristics of HIV diagnosis in MSM in Catalonia, 2011-2013

	N	%
Age group		
>= 55 years	37	3.3%
45-54 years	130	11.5%
35-44 years	336	29.7%
25-34 years	493	43.6%
<25 years	134	11.9%
Origin		
Foreign	503	44.5%
Spain	627	55.5%
Previous STI		
No	627	55.5%
Yes	228	20.2%
Unknown	274	24.2%
Total	1130	

Table 2 . Factors associated with early presentation for HIV in MSM, multivariable logistic regression model. Catalonia, 2011-2013

		Early diagnosis		•
	N	(%)	OR	95% CI
Age group				
>= 55 years	30	43.3%	1.00	
45-54 years	90	48.9%	1.24	0.54-2.86
35-44 years	250	59.2%	1.89	0.87-4.09
25-34 years	382	67.5%	2.78	1.30-5.97
<25 years	103	77.7%	4.55	1.92-10.80
Origin				
Foreign	381	60.1%	1.00	
Spain	474	66.2%	1.41	1.06-1.88
Previous STI				
No	627	61.1%		
Yes	228	70.2%	1.48	1.06-2.06
Total	855	63.5%		

# CONCLUSIONS

In Catalonia, having a STI in the previous 12 months to HIV is a determinant for early HIV presentation. MSM with previous STI would show greater awareness concerning the risk of concomitant HIV infection and would seek health care more frequently, leading to the earlier diagnosis of HIV infection.

Risk assessment, HIV screening and link to care must be a priority in settings where STI are diagnosed or screened.

Further analysis should be performed to address preferred HIV testing scenarios by MSM.

